

September 2001

INEEL Site Engineering and Resource Facility Project (Draft)

Response to Performance Evaluation Measure 2.3.4.1 (Part 2)

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BEYOND THE INEEL**

SUMMARY

At the time the Infrastructure Long-Range Plan was published (February, 2001), the forecasted population for the INEEL was significantly different compared to present expectations. Based on that earlier population forecast, construction of a Site Engineering and Resource Facility (SERF) would have been a sound financial alternative. The SERF would reduce the life-cycle cost of maintaining Environmental Management-funded infrastructure at the Department of Energy's Idaho National Engineering and Environmental Laboratory (INEEL). The project would replace old, inefficient and costly office and administrative buildings with one or two new, state-of-the-art facilities designed to support INEEL operations through mission end. However, based on current workforce restructuring and work location optimization efforts, construction of a SERF building is not justified.

The SERF was initially planned to consolidate 34 buildings containing over 350,000 square feet of space into a single 150,000-square foot building housing 700 personnel. This facility consolidation was expected to result in significant annual and life cycle cost savings.

However, the design requirements of the SERF were reconsidered in the light of a major workforce restructuring now underway at the INEEL. Based in part on anticipated future funding levels, the restructuring is currently planned to reduce the INEEL population by 1,200 personnel. This staff reduction is expected to be split almost evenly between site and town locations.

A company-wide review of work locations for all employees is an integral part of the restructuring effort. While many employees will continue to be located at the INEEL site, indications are that the INEEL has an opportunity for major cost savings and productivity improvements by locating the maximum number of employees in town.

Because the ultimate effect of staff reductions and relocations is still uncertain, several SERF alternatives that reflect a range of staffing scenarios were developed as delineated below and summarized in Figure S-1.

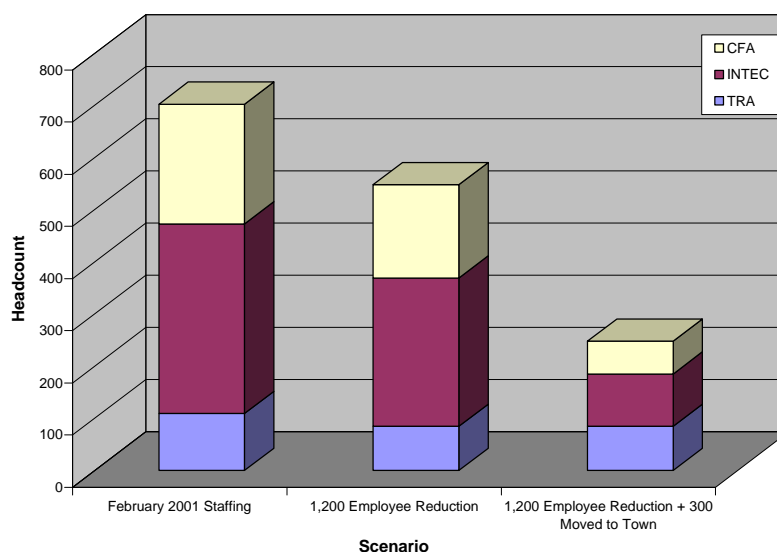


Figure S-1. Projected population of SERF occupant candidates by area.

February 2001 Staffing Scenario

This is the original project scenario that, although unlikely, could become relevant again given the history of funding level swings. This scenario assumes an INEEL population as forecasted in the 2001 LRP in February 2001—6,300 BBWI employees.

Life-cycle costs were evaluated for Alternatives 1–4, with results as summarized in Figure S-2. The four alternatives can be described as follows:

- Alternative 1 - Do nothing, continue to maintain and operate the 34 existing buildings. The life cycle cost for this option is \$244M.
- Alternative 2 - Construct a single building located at the Idaho Nuclear Technology and Engineering Center (INTEC), to replace all 34 of the buildings. The facility would accommodate 700 personnel. The life cycle cost for this option is \$120M.
- Alternative 3 - Construct two buildings, one located at INTEC, and one at the Test Reactor Area (TRA) to replace all 34 of the buildings. The new buildings would together house 700 personnel. The two-building approach is being considered because of operational objections to moving TRA personnel outside the area security fence to the vicinity of INTEC about a mile away. The life cycle cost of this alternative is \$149M.
- Alternative 4 - Obtain the SERF via an operating lease or an Energy Savings Performance Contract. However, many issues remain to be resolved before this option can be successfully implemented. The life cycle cost of this option is calculated to be \$111M.

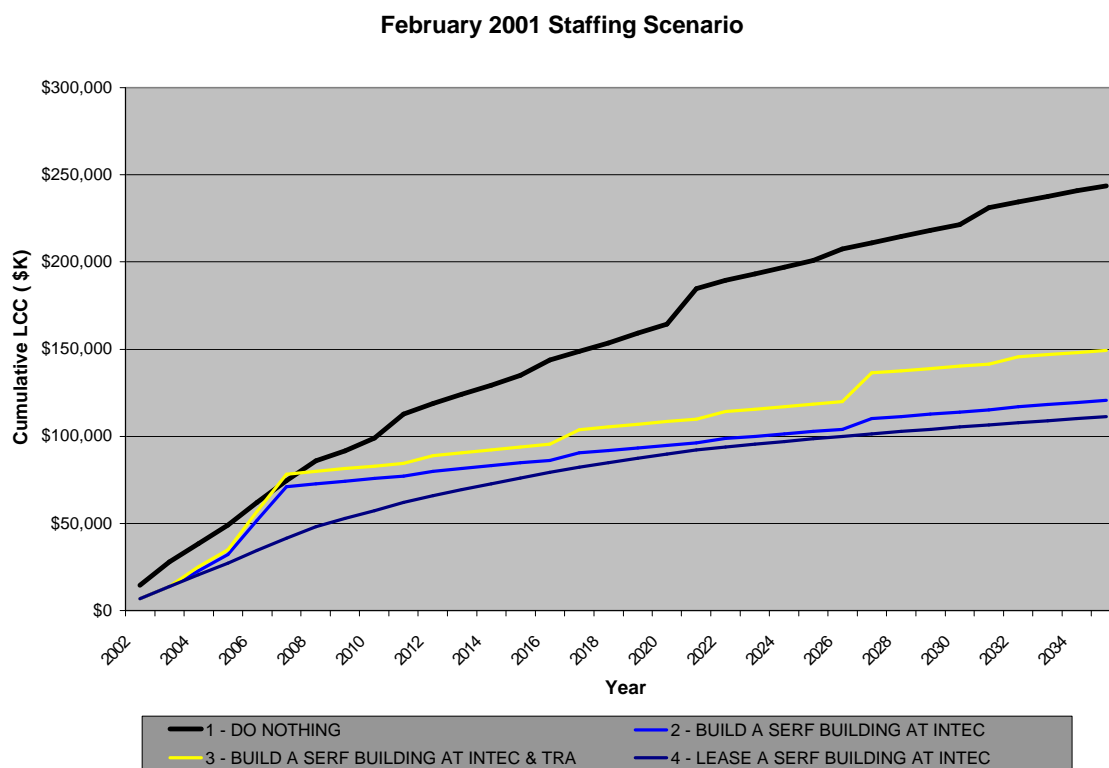


Figure S-2. Cumulative Life Cycle Cost Summary.

The baseline buildings identified for replacement by a SERF facility are summarized in Table S-1.

Table S-1. Baseline buildings identified for replacement.

SERF EXISTING BUILDING BASELINE (February 2001 Staffing Scenario)				
Building	Description	Age (yrs)	Floor Area (sq ft)	Occupants to SERF
CF-1606	CFA TRAINING FACILITY	7	4960	
CF-1608	MODULAR OFFICE	7	7056	25
CF-1609	DOE MODULAR OFFICE	7	5800	24
CF-1610	MODULAR OFFICE	7	4700	20
CF-612	OFFICE/THREE LABS	18	9855	16
CF-614	OFFICE BUILDING #2	15	8090	18
CF-615	OFFICE BUILDING	11	9844	27
CF-629	OFFICE	22	9867	29
CF-662	CAFETERIA	50	12421	
CF-686	HIGH BAY	22	3878	
CF-688	TECHNICAL CENTER	38	19381	11
CF-689	TECHNICAL CENTER	38	26825	59
Area Totals =			122677	229
CPP-1604	OFFICE BUILDING	15	22500	75
CPP-1605	ENG SUPPORT BUILDING	15	16800	36
CPP-1631	PROD COMPUTER SUPPORT	13	9600	27
CPP-1666	ENG SUPPORT OFFICES	8	7168	31
CPP-629	OFFICE BUILDING (MODULAR)	11	7000	26
CPP-630	SAFETY/SPECTROMETRY	45	22090	5
CPP-645	OFFICE BUILDING	25	5863	18
CPP-656	OFFICE BUILDING	23	10000	28
CPP-665	FPR PROJECT OFFICES	21	19200	50
CPP-668	ENG SUPPORT OFFICES	23	7000	20
CPP-698	MK-FIC OFF/WAREHOUSE	17	25000	23
CPP-699	TRAIN/PROD OFFICE BLDG	16	11200	25
Area Totals =			163421	364
TRA-614	OFF BLDG/BUNK HOUSE	49	6200	8
TRA-616	CAFETERIA	49	4197	
TRA-620	OFFICE BUILDING	49	1888	6
TRA-635	MAT RECEIV & LAB AREA	49	22046	30
TRA-637	BUNKHOUSE TRAILER	23	600	
TRA-638	TRAINING TRAILER	22	2040	5
TRA-647	ETR OFFICE BUILDING	44	11793	10
TRA-649	MTR OFF BLDG WING C	35	6852	17
TRA-652	MTR OFF BLDG WING B	35	13407	28
TRA-667	DISPENSARY & OFF BLDG	37	4168	5
Area Totals =			73191	109
CFA, INTEC and TRA SERF Total =				702

1,200 Employee Reduction Scenario

This scenario assumes that workforce restructuring eliminates 1,200 positions at the INEEL, approximately half of which are at the site. It further assumes the remaining population of SERF occupancy candidates will have been consolidated into the newest and least expensive existing buildings as a best management practice.

Life cycle costs were evaluated for Alternatives 5–8, with results as summarized in Figure S-3. The four alternatives can be described as follows:

- Alternative 5 - Do nothing. Continue to use the 24 SERF-related buildings at Central Facilities Area (CFA), INTEC, and TRA. The life cycle cost for this option is \$153M.
- Alternative 6 - Construct a single SERF building outside the fence at INTEC to house 550 office personnel. The life cycle cost for this option is \$89M.
- Alternative 7 - Construct two consolidated buildings. The SERF would still be located outside the INTEC fence, but would only be built for 280 occupants while a second building would be constructed at TRA to house 270 occupants. The life cycle cost for this option is \$111M.
- Alternative 8 - Construct a single building inside the boundaries of TRA to house 270 occupants. This option addresses operational objections to moving the TRA personnel outside the area security fence to the vicinity of INTEC about a mile away. CFA personnel would be accommodated by the new facility, while INTEC would continue to use existing buildings. The life cycle cost for this option is \$116M.

1,200 Employee Reduction Scenario

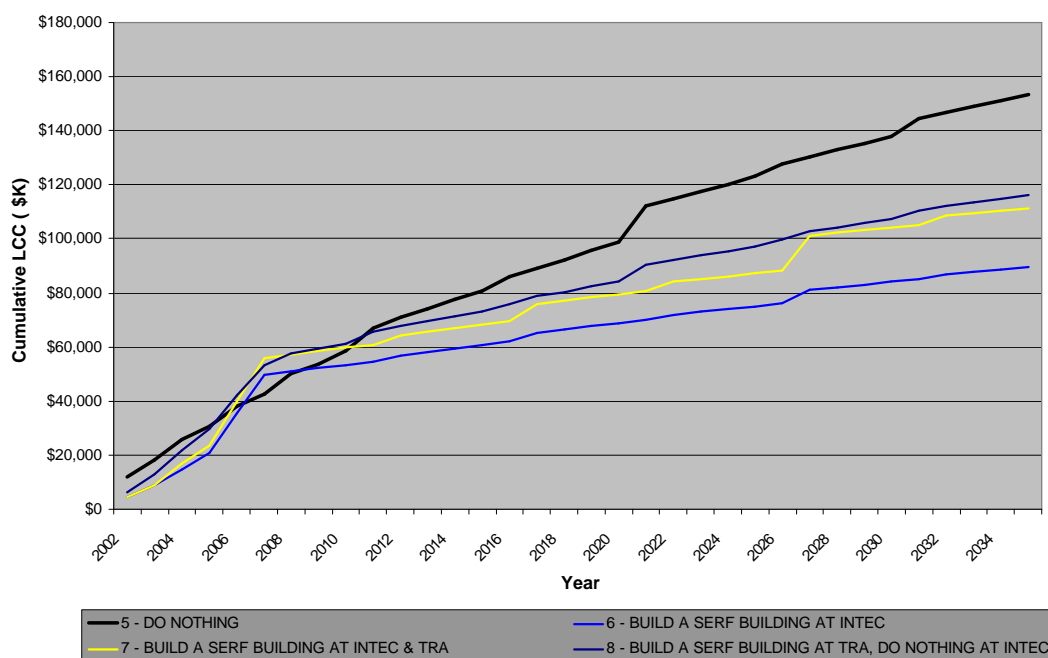


Figure S-3. Cumulative Life Cycle Cost Summary with 1,200 employee reduction.

The adjusted baseline list of buildings identified for replacement by a SERF facility is summarized in Table S-2.

Table S-2. Adjusted baseline list of buildings identified for replacement.

SERF EXISTING BUILDING BASELINE (-1200 Employee Reduction Scenario)				
Building	Description	Age (yrs)	Floor Area (sq ft)	Occupants to SERF
CF-1606	CFA TRAINING FACILITY	7	4960	
CF-1608	MODULAR OFFICE	7	7056	35
CF-1609	DOE MODULAR OFFICE	7	5800	24
CF-1610	MODULAR OFFICE	7	4700	20
CF-612	OFFICE/THREE LABS	18	9855	23
CF-614	OFFICE BUILDING #2	15	8090	21
CF-615	OFFICE BUILDING	11	9844	27
CF-629	OFFICE	22	9867	29
CF-662	CAFETERIA	50	12421	
AreaTotals =			72593	179
CPP-1604	OFFICE BUILDING	15	22500	100
CPP-1605	ENG SUPPORT BUILDING	15	16800	50
CPP-1631	PROD COMPUTER SUPPORT	13	9600	29
CPP-1666	ENG SUPPORT OFFICES	8	7168	25
CPP-630	SAFETY/SPECTROMETRY	45	22090	5
CPP-645	OFFICE BUILDING	25	5863	25
CPP-668	ENG SUPPORT OFFICES	23	7000	25
CPP-699	TRAIN/PROD OFFICE BLDG	16	11200	25
AreaTotals =			102221	284
TRA-616	CAFETERIA	49	4197	
TRA-635	MAT RECEIV & LAB AREA	49	22046	29
TRA-637	BUNKHOUSE TRAILER	23	600	
TRA-638	TRAINING TRAILER	22	2040	5
TRA-649	MTR OFF BLDG WING C	35	6852	17
TRA-652	MTR OFF BLDG WING B	35	13407	29
TRA-667	DISPENSARY & OFF BLDG	37	4168	5
AreaTotals =			53310	85
CFA, INTEC and TRA SERF Total =				548

1,200 Employee Reduction with 300 Moved to Town Scenario (reflects current planning)

This scenario assumes that 300 SERF targeted employees would be moved from the site to town. This relocation would be in addition to the INEEL 1,200-employee reduction resulting from workforce restructuring. The 300 employees would be from CFA and INTEC with no significant reduction of employees at TRA. The scenario also assumes the remaining population of SERF occupancy candidates at CFA and INTEC would be consolidated into the newest and least expensive existing buildings as a best management practice.

Life cycle costs were evaluated for Alternatives 9 and 10, with results as summarized in Figure S-4. The two alternatives can be described as follows:

- Alternative 9 - Do nothing. Continue to use the 14 SERF-related buildings at CFA, INTEC, and TRA. The life cycle cost for this option is \$87M.
- Alternative 10 - Construct a single office building at TRA to accommodate 85 TRA SERF occupancy candidates replacing older SERF-related TRA buildings. Continue to use seven relatively new SERF-related buildings at CFA and INTEC. The life cycle cost for this option is \$55M.
 * SERF occupancy candidates do not include TRA office workers required by function to work at the TRA site. SERF occupancy candidates are workers that could potentially relocate to a building located at INTEC.

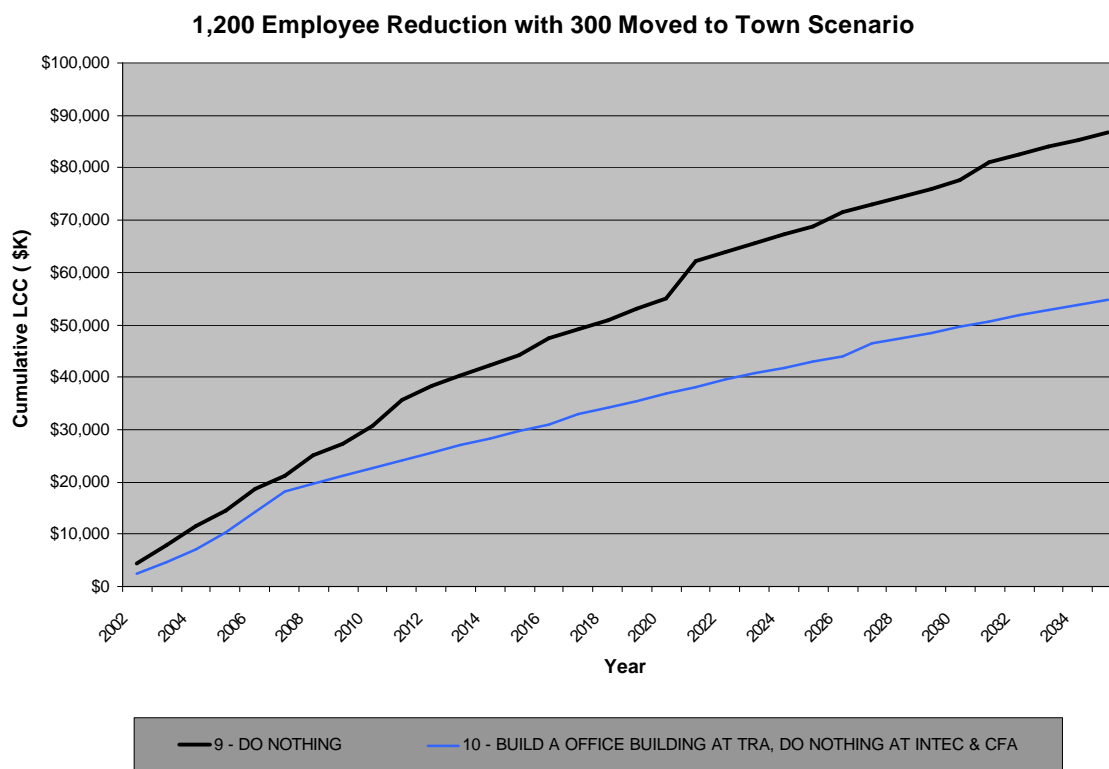


Figure S-4. Cumulative Life Cycle Cost Summary with 1,200 employee reduction, and 300 moved to town.

The revised baseline list of buildings identified for replacement by a SERF facility is summarized in Table S-3.

Table S-3. Revised baseline list of buildings identified for replacement.

SERF EXISTING BUILDING BASELINE (-1200 Employee Reduction with 300 Moved to Town Scenario)				
Building	Description	Age (yrs)	Floor Area (sq ft)	Occupants to SERF
CF-1606	CFA TRAINING FACILITY	7	4960	
CF-1608	MODULAR OFFICE	7	7056	15
CF-1609	DOE MODULAR OFFICE	7	5800	14
CF-612	OFFICE/THREE LABS	18	9855	13
CF-615	OFFICE BUILDING	11	9844	20
Area Totals =			37515	62
CPP-1604	OFFICE BUILDING	15	22500	85
CPP-1631	PROD COMPUTER SUPPORT	13	9600	15
Area Totals =			32100	100
TRA-616	CAFETERIA	49	4197	
TRA-635	MAT RECEIV & LAB AREA	49	22046	29
TRA-637	BUNKHOUSE TRAILER	23	600	
TRA-638	TRAINING TRAILER	22	2040	5
TRA-649	MTR OFF BLDG WING C	35	6852	17
TRA-652	MTR OFF BLDG WING B	35	13407	29
TRA-667	DISPENSARY & OFF BLDG	37	4168	5
Area Totals =			53310	85
Total SERF Population =				247

Conclusions

1. Constructing a single office building for TRA employees identified as potential SERF building occupants (Alternative 10) results in the lowest life cycle cost. This alternative also reflects current best information regarding expected INEEL site population and the related SERF occupant candidate population.
2. The single office building identified by Alternative 10 may not completely address TRA internal needs. SERF occupant candidates in the seven buildings listed in Table 3 were identified based on the assumption that they could be relocated to a remote facility adjacent to INTEC. Many office workers at TRA are required to be located at TRA and a new facility should address all of the area needs.
3. New office facilities are not required at CFA and INTEC based on current best planning information. BBWI restructuring will reduce the workforce by 1,200. In addition, it is expected that 300 CFA and INTEC SERF candidate occupants will be relocated to Idaho Falls in FY 2002, instead of being available for relocation to a new SERF building. SERF candidate workers remaining at CFA and INTEC can be consolidated into seven existing newer facilities providing increased efficiency and reduced life cycle cost.
4. Reducing the BBWI workforce by 1,200 and in addition, relocating 300 workers from the site to town provides an opportunity for significant life cycle cost reduction. Workers can be consolidated into newer, more efficient buildings and older less efficient buildings can be deactivated. A rough order of magnitude estimate of this possible cost reduction is \$157M, as indicated by the difference between Alternative 1 and Alternative 9. Deactivating the unused buildings will also significantly reduce the budget gap.
5. None of the alternatives considered above justifies development of a CD-0 Mission Need document at this time.

Alternatives 1 through 8 represent population scenarios that do not reflect current best planning information.

Alternative 9 is to do nothing, and does not address old, inefficient buildings located at TRA.

Alternative 10 does not address overall office space needs for TRA because of worker mobility requirements for the targeted SERF population.

Recommendation

Based on current best planning information and life cycle cost analysis of alternatives, construction of a SERF building is not justified. A CD-0 Mission Need Document should not be developed.

The TRA Administration Building Project Mission Need Document, issued to the Office of Nuclear Energy (NE) in March 2001,¹ provides for "Replacement/Consolidation of the TRA Administrative Spaces/Functions." This project addresses TRA as a whole, including workers not able to relocate to a remote SERF building. A facility designed to accommodate 220 occupants is required. The construction of this facility is clearly justified as described in the Mission Need document. In addition, it is recommended that DOE should pursue the appropriate funding.

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ACRONYMS

CFA	Central Facilities Area
CFR	Code of Federal Regulations
DOE	Department of Energy
EM	Environmental Management
EROB	Engineering Research Office Building
FY	fiscal year
INEEL	Idaho National Engineering and Environmental Laboratory
INTEC	Idaho Nuclear Technology and Engineering Center
ISMS	Integrated Safety Management System
LCC	Life Cycle Cost
LEED	Leadership Energy and Environmental Design
LICP	Line-Item Construction Project
NEPA	National Environmental Policy Act
SERF	Site Engineering and Resource Facility
STD	standard
TEC	total estimated cost
TPC	total project cost
TRA	Test Reactor Area

INEEL Site Engineering and Resource Facility Project

1. MISSION NEED

1.1 Background and Scope

At the time the Infrastructure Long-Range Plan was published (February 2001), the forecasted population for the Idaho National Engineering and Environmental Laboratory (INEEL) was significantly different compared to present expectations. Based on that earlier population forecast, construction of a Site Engineering and Resource Facility (SERF) project at the INEEL would significantly reduce annual maintenance and operating costs. SERF would allow closure of numerous old and/or inefficient facilities and consolidation of activities. In addition, many infrastructure capital projects needed to extend the life of existing facilities could be avoided.

Approximately \$75 million is spent at the INEEL each year for maintenance of infrastructure. This expenditure equates to an annual square-foot-based cost of \$14. Much of this expense is due to workers being located in numerous high-maintenance facilities scattered throughout the 889-mi² site. Consolidation of personnel and functions into a new, more efficient facility has the potential to save a significant amount of money over the life cycle.

As originally conceived, the SERF would consolidate functions currently performed in buildings at the Central Facilities Area, Idaho Nuclear Technology and Engineering Center (INTEC), and Test Reactor Area (TRA). SERF would replace 34 buildings ranging in age from 7 to 49 years old. The buildings total over 350,000 ft² and housed about 820 people. Approximately 700 of those people would be located in the SERF; the remaining people would be relocated to other facilities. This SERF would contain approximately 150,000 ft² and would be located in close proximity to the core functions at INTEC.

However, Bechtel BWXT Idaho, LLC (BBWI) is currently going through workforce restructuring and a significant workforce reduction is planned. As a result, the number of workers considered to be candidates for occupying a SERF facility will also be reduced. The exact parameters of a SERF cannot be known for certain until the restructuring efforts are completed.

1.2 Consolidation and Cost Avoidance

Currently, a significant portion of the annual INEEL budget is spent on maintaining infrastructure. Based on known missions, the need to maintain infrastructure at some facilities is a relatively short-term concern. Test Area North, with the exception of the Specific Manufacturing Capability, will conclude operations in 2004 with Waste Reduction Operations Complex/Power Burst Facility ceasing operations in about 2006. However, areas such as INTEC and TRA will have missions at least until the year 2035 (and beyond in the case of TRA). The need to maintain the infrastructure in these areas provides a basis for potential cost avoidance. The elimination and/or inactivation of facilities

Based on the Long-Range Plan population forecast, construction of a Site Engineering and Resource Facility (SERF) project at the INEEL would significantly reduce annual maintenance, operating and upgrade costs.

BBWI is currently going through workforce restructuring and a significant workforce reduction is planned.

INTEC has a long-term mission and is a likely candidate to consolidate functions from other site areas, thus reducing the overall number of services, facilities, and utilities necessary to support INEEL missions.

Many of the programs supported by CFA in surrounding areas are concluding in the near future. Consolidation of most of the remaining services to other site areas and inactivation of facilities/structures/utilities at CFA could save future maintenance and upgrade costs.

could result in an overall cost reduction for the infrastructure program at the INEEL. Maintenance would not be necessary on the facilities and future upgrades could be eliminated. INTEC has a long-term mission and is a likely candidate to consolidate functions from other site areas, thus reducing the overall number of services, facilities, and utilities necessary to support INEEL missions.

Reduction of facility and utility systems at CFA is considered a high priority. At the present time, the CFA is the service and support center for programs located at other primary facilities in surrounding areas on the INEEL. These services include transportation, maintenance, environmental and radiological monitoring, security, fire protection, warehousing, training, calibration and instrumentation laboratories, medical, and other administrative support offices. The average age of buildings at CFA is 30 years and several of the utility systems that support these buildings are as old as 40 years. The Infrastructure Long-Range Plan indicates replacement or significant upgrades of buildings and utilities will be required if CFA is to remain in full operation. However, many of the programs supported by CFA in surrounding areas are concluding in the near future and support service requirements are diminishing. Consolidation of most of the remaining services at CFA to other site areas and inactivation of facilities/structures/utilities at CFA could save future maintenance and upgrade costs.

Construction of a new consolidated office building and a laboratory facility outside of CFA could reduce the future infrastructure needs by eliminating office and laboratory space requirements. Reductions and relocation of warehousing needs and the consolidation of INEEL craft and maintenance functions to INTEC or TRA would further reduce the CFA infrastructure requirements. The combined actions could eliminate numerous facilities leaving CFA's long-term mission as supporting services for fire, medical, transportation, security, equipment calibration, and a few other necessary services (i.e., power management and telecommunications). Future infrastructure resources for CFA could concentrate on those few remaining facilities supporting this mission.

As originally conceived, the SERF project, in conjunction with the Consolidated Laboratory Complex project and the Infrastructure Restoration/Optimization project, would upgrade INEEL mission-critical infrastructure and reduce maintenance costs at the INEEL. This would in turn reduce the gap between out-year funding allocations and projected funding needs. Without a reduction, the gap is forecast to increase significantly over the next decade, inhibiting the INEEL's ability to support the identified Department of Energy (DOE) missions.

Preliminary data show that \$5 million is required annually for operation, surveillance, and maintenance of the 34 candidate buildings; plus, \$57 million in capital upgrades is required for them to remain viable through currently identified missions. Capital upgrades consist of electrical, mechanical, structural, heating, ventilating, air conditioning, and roof repairs/replacements necessary just to maintain an acceptable safety envelope until the buildings reach either the end of their useful life or the anticipated area closure date(s).

1.3 Alternatives

1.3.1 Methodology

Life cycle cost analysis was completed to evaluate various alternatives. This economic analysis was based on information provided in the *INEEL Infrastructure Long-Range Plan*,² the Indirect Funded Work Baseline for 2000, the *INEEL FY 2001–2005 Institutional Plan*,³ the *TRA Administration Building Project Mission Need Document*,¹ and information supplied from the Technical Services organization.

Alternatives were evaluated using life cycle cost analysis.

The life cycle cost analysis was generated to match the published schedule for capital expenditures. The Economic Evaluation assumed a 34-year period (2002 through 2035). Maintenance costs and associated labor costs were calculated using a cost per square foot of \$14 as supplied by the Infrastructure and Maintenance Programs organization. Heating and cooling costs were calculated using historical data from the *INTEC Thermal Energy Study—Final Report*.⁴ Capital repairs were scheduled and costs estimated utilizing the INEEL's historical data for replacement schedules.

Annual costs for operations and maintenance were based on FY 2000 actuals, as stated in the *INEEL Infrastructure Long-Range Plan* and projected to a future cost based on operations and engineering judgment. Annual cost increase rates were determined using a Monte Carlo analysis with input based on engineering experience and judgment.

1.3.2 BBWI Workforce Restructuring and Work Location Review

Design requirements of the SERF were considered in the light of a major restructuring now underway at the INEEL. Based in part on anticipated future funding levels, the restructuring is currently planned to reduce the INEEL population by 1,200 personnel. This staff reduction is expected to be split almost evenly between site and town locations.

A company-wide review of work locations for all employees is an integral part of the restructuring effort. While many employees will continue to be located at the INEEL site, indications are that the INEEL has an opportunity for major cost savings and productivity improvements by locating the maximum number of employees in town.

Because the ultimate effect of staff reductions and relocations is still uncertain, several SERF alternatives, which reflect a range of staffing scenarios, were developed.

1.3.3 Alternatives Evaluated

Because the ultimate effect of staff reductions and relocations is still uncertain, several SERF alternatives, which reflect a range of staffing scenarios, were developed.

1.3.3.1 February 2001 Staffing Scenario

This is the original project-staffing scenario that, although unlikely, could become relevant again given the history of funding level swings. This scenario assumes an INEEL population as forecasted in the 2001 LRP in February 2001—6,300 BBWI employees. For this scenario, 34 buildings were identified at CFA,

INTEC, and TRA as candidates for replacement by a SERF. Table 1 summarizes this baseline list of buildings.

Table 1. SERF existing building baseline

(February 2001 Staffing Scenario)				
Building	Description	Age (yrs)	Floor Area (sq ft)	Candidate Occupants for SERF
CF-1606	CFA TRAINING FACILITY	7	4960	
CF-1608	MODULAR OFFICE	7	7056	25
CF-1609	DOE MODULAR OFFICE	7	5800	24
CF-1610	MODULAR OFFICE	7	4700	20
CF-612	OFFICE/THREE LABS	18	9855	16
CF-614	OFFICE BUILDING #2	15	8090	18
CF-615	OFFICE BUILDING	11	9844	27
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Area Totals =			122677	229
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TRA-667	DISPENSARY & OFF BLDG	37	4168	5
Area Totals =			73191	109
Total SERF Candidate Population =				702

For this staffing scenario, life cycle costs were evaluated for four alternatives. The four alternatives can be described as follows:

The original project-staffing scenario assumes an INEEL population as forecasted in the 2001 LRP in February 2001—6,300 BBWI employees.

- Alternative 1 - Do nothing, continue to maintain and operate the 34 existing buildings. The life cycle cost for this option is \$244M.
- Alternative 2 - Construct a single building located at the INTEC to replace all 34 of the buildings. The facility would accommodate 700 personnel. The life cycle cost for this option is \$120M.
- Alternative 3 - Construct two buildings, one located at INTEC and one at TRA to replace all 34 of the buildings. The new buildings would together house 700 personnel. The two-building approach is being considered because of operational objections to moving

TRA personnel outside the area security fence to the vicinity of INTEC about a mile away. The life cycle cost of this alternative is \$149M.

Alternative 4 - Obtain the SERF via an operating lease or an Energy Savings Performance Contract. However, many issues remain to be resolved before this option can be successfully implemented. The life cycle cost of this option is calculated to be \$111M.

The life cycle cost analysis results for this staffing scenario are summarized in Table 2. (Detailed life cycle cost analysis information is included in Appendix D.)

Table 2. Analysis of Alternatives Summary (February 2001 Staffing Scenario)

Alternatives	LCC	Advantages	Disadvantages
1. Do Nothing – Continue to use existing buildings	\$244M	None	Existing 34 facilities will continue to require high maintenance and capital upgrades
2. Build single new Site Engineering and Resource Facility at INTEC	\$120M	34 existing buildings would be consolidated into one 150,000 ft ² facility, reducing footprint by 210,000 ft ²	Ignores TRA's requirement to retain TRA personnel in close proximity
3. Build new Site Engineering and Resource Facilities at INTEC and TRA	\$149M	Even though two facilities, still less costly than maintaining current facilities	Doesn't have all consolidation advantages as would single facility
4. Private developer builds new facility and leases it back, includes maintenance in lease	\$111M	Eliminates need for capital dollars, successfully implemented at other DOE sites	Must enable private construction on government ground

1.3.3.2 1,200 Employee Reduction Scenario

This staffing scenario assumes the workforce restructuring eliminates 1,200 positions at the INEEL, approximately half of which are at the site. It further assumes the remaining population of SERF candidate personnel will be consolidated into the newest and least expensive buildings as a best management practice. For this scenario, 24 buildings were identified at CFA, INTEC, and TRA as candidates for replacement by a SERF facility. Table 3 summarizes the baseline list of buildings for this staffing scenario.

Table 3. SERF existing building baseline

(-1200 Employee Reduction Scenario)				
Building	Description	Age (yrs)	Floor Area (sq ft)	Candidate Occupants for SERF
CF-1606	CFA TRAINING FACILITY	7	4960	
CF-1608	MODULAR OFFICE	7	7056	35
CF-1609	DOE MODULAR OFFICE	7	5800	24
CF-1610	MODULAR OFFICE	7	4700	20
CF-612	OFFICE/THREE LABS	18	9855	23
CF-614	OFFICE BUILDING #2	15	8090	21
CF-615	OFFICE BUILDING	11	9844	27
CF-629	OFFICE	22	9867	29
CF-662	CAFETERIA	50	12421	
AreaTotals =			72593	179
CPP-1604	OFFICE BUILDING	15	22500	100
CPP-1605	ENG SUPPORT BUILDING	15	16800	50
CPP-1631	PROD COMPUTER SUPPORT	13	9600	29
CPP-1666	ENG SUPPORT OFFICES	8	7168	25
CPP-630	SAFETY/SPECTROMETRY	45	22090	5
CPP-645	OFFICE BUILDING	25	5863	25
CPP-668	ENG SUPPORT OFFICES	23	7000	25
CPP-699	TRAIN/PROD OFFICE BLDG	16	11200	25
AreaTotals =			102221	284
TRA-616	CAFETERIA	49	4197	
TRA-635	MAT RECEIV & LAB AREA	49	22046	29
TRA-637	BUNKHOUSE TRAILER	23	600	
TRA-638	TRAINING TRAILER	22	2040	5
TRA-649	MTR OFF BLDG WING C	35	6852	17
TRA-652	MTR OFF BLDG WING B	35	13407	29
TRA-667	DISPENSARY & OFF BLDG	37	4168	5
AreaTotals =			53310	85
Total SERF Candidate Population =				548

Assumes the remaining population of SERF candidate personnel will be consolidated into the newest and least expensive buildings as a best management practice.

1,200 Employee Reduction Scenario assumes the workforce restructuring eliminates 1,200 positions at the INEEL, approximately half of which are at the site.

Life cycle costs were then evaluated for Alternatives 5–8. These alternatives can be described as follows:

- Alternative 5 - Do nothing. Continue to use the 24 SERF-related buildings at CFA, INTEC, and TRA. The life cycle cost for this option is \$153M.
- Alternative 6 - Construct a single SERF building outside the fence at INTEC to house 550 office personnel. The life cycle cost for this option is \$89M.
- Alternative 7 - Construct two consolidated buildings. The SERF would still be located outside the INTEC fence, but would only be built for 280 personnel while a second building would be constructed at TRA to house 270 personnel. The life cycle cost for this option is \$111M.
- Alternative 8- Construct a single building inside the boundaries of TRA to house 270 personnel. This option addresses operational objections to moving the TRA personnel outside the area security fence to the vicinity of INTEC about a mile away. CFA personnel would be accommodated by the new facility while INTEC would continue to use existing buildings. The life cycle cost for this option is \$116M.

The life cycle cost analysis results for this staffing scenario are summarized in Table 4. (Detailed life cycle cost analysis information is included in Appendix D.)

Table 4. Analysis of Alternatives Summary (1200 Employee Reduction Scenario)

Alternatives	LCC	Advantages	Disadvantages
5. Do Nothing – Continue to use existing buildings	\$153M	None	Existing 24 facilities will continue to require high maintenance and capital upgrades
6. Build smaller single new Site Engineering and Resource Facility at INTEC	\$89M	24 existing buildings would be consolidated into one 120,000 ft ² facility, reducing footprint by 108,000 ft ²	Ignores TRA's requirement to retain TRA personnel in close proximity
7. Build smaller new Site Engineering and Resource Facilities at INTEC and TRA	\$111M	Even though two facilities, still less costly than maintaining current facilities	Doesn't have all consolidation advantages as would a single facility
8. Build new Site Engineering and Resource Facility at TRA. INTEC will use newer existing buildings	\$116M	Requires capital construction of only one smaller facility	Not very accessible by non-TRA personnel, retains some existing older buildings at INTEC

1.3.3.3 1,200 Employee Reduction with 300 Moved to Town Scenario (best reflects current planning)

This staffing scenario assumes that 300 SERF targeted employees would be moved from the site to town. This relocation would be in addition to the INEEL 1,200-employee reduction resulting from workforce restructuring. The 300 employees would be from CFA and INTEC with no significant reduction of employees at TRA. The scenario also assumes the remaining population of SERF personnel at CFA and INTEC would be consolidated into the newest and least expensive buildings as a best management practice. Table 5 summarizes the baseline list of buildings for this staffing scenario.

Table 5. SERF existing building baseline

(-1200 Employee Reduction with 300 Moved to Town Scenario)				
Building	Description	Age (yrs)	Floor Area (sq ft)	Candidate Occupants for SERF
CF-1606	CFA TRAINING FACILITY	7	4960	
CF-1608	MODULAR OFFICE	7	7056	15
CF-1609	DOE MODULAR OFFICE	7	5800	14
CF-612	OFFICE/THREE LABS	18	9855	13
CF-615	OFFICE BUILDING	11	9844	20
Area Totals =			37515	62
CPP-1604	OFFICE BUILDING	15	22500	85
CPP-1631	PROD COMPUTER SUPPORT	13	9600	15
Area Totals =			32100	100
TRA-616	CAFETERIA	49	4197	
TRA-635	MAT RECEIV & LAB AREA	49	22046	29
TRA-637	BUNKHOUSE TRAILER	23	600	
TRA-638	TRAINING TRAILER	22	2040	5
TRA-649	MTR OFF BLDG WING C	35	6852	17
TRA-652	MTR OFF BLDG WING B	35	13407	29
TRA-667	DISPENSARY & OFF BLDG	37	4168	5
Area Totals =			53310	85
Total SERF Candidate Population =				247

Assumes the remaining population of SERF personnel at CFA and INTEC would be consolidated into the newest and least expensive buildings as a best management practice.

1,200 Employee Reduction with 300 Moved to Town Scenario (best reflects current planning assumes that 300 SERF targeted employees would be moved from the site to town.

Life cycle costs were evaluated for Alternatives 9 and 10. The two alternatives can be described as follows:

Alternative 9 - Do nothing. Continue to use the 14 SERF-related buildings at CFA, INTEC, and TRA. The life cycle cost for this option is \$87M.

Alternative 10 - Construct a single office building at TRA to accommodate 85 SERF candidate employees* while replacing older SERF-related TRA buildings. Continue to use seven relatively new SERF-related buildings at CFA and INTEC. The life cycle cost for this option is \$55M.

*This alternative does not include TRA office workers required by function to work at the TRA site.

The life cycle cost analysis results for this staffing scenario are summarized in Table 6. (Detailed life cycle cost analysis information is included in Appendix D.)

Table 6. Analysis of Alternatives Summary (1200 Employee Reduction with 300 Moved to Town Scenario)

Alternatives	LCC	Advantages	Disadvantages
9. Do Nothing – Continue to use existing buildings	\$87M	None	Existing TRA facilities will continue to require high maintenance and capital upgrades (INTEC & CFA facilities are newer)
10. Build new Office Facility at TRA, and move additional 300 site people to town, INTEC & CFA will use existing newer buildings.*	\$55M	Requires construction of only one small office facility for 85 TRA SERF candidate Workers. Moves some TRA people out of 7 high-cost buildings	Does not address overall Administrative Office needs for TRA. TRA needs space for a total of 220 office workers, replacing functions in 10 old buildings.

1.4 Conclusions

1. Construct a single office building for TRA employees identified as potential SERF building occupants (Alternative 10) results in the lowest life cycle cost. This alternative also reflects current best information regarding expected INEEL site population and the related SERF occupant candidate population.
2. The single office building identified by Alternative 10 may not completely address TRA's internal needs. SERF occupant candidates in the seven buildings listed in Table 5 were identified based on the assumption they could be relocated to a remote facility adjacent to INTEC. Many office workers at TRA are required to be located at TRA and a new facility should address all of the area needs.
3. New office facilities are not required at CFA and INTEC based on current best planning information. BBWI restructuring will reduce the workforce by 1,200. In addition, it is expected that 300 CFA and INTEC SERF candidate occupants will be relocated to Idaho Falls in FY 2002, instead of being available for relocation to a new SERF building. SERF candidate workers remaining at CFA and INTEC can be consolidated into seven existing newer facilities providing increased efficiency and reduced life cycle cost.
4. Reducing the BBWI workforce by 1,200 and relocating 300 workers from the site to town provides an opportunity for significant life cycle cost reduction. Workers can be consolidated into newer, more efficient buildings and older less efficient buildings can be deactivated. A rough order of magnitude estimate of this possible cost reduction is \$157M, as indicated by the difference between Alternative 1 and Alternative 9. Deactivating the unused buildings will also significantly reduce the budget gap.

5. None of the SERF-related alternatives justifies development of a CD-0 Mission Need document at this time.

Alternatives 1 through 8 represent population scenarios that do not reflect current best planning information.

Alternative 9 is a do nothing alternative and does not address old inefficient buildings located at TRA.

Alternative 10 does not address overall office space needs for TRA because of worker mobility requirements for the targeted SERF population.

1.5 Recommendations

1. Based on current best planning information and life cycle cost analysis of alternatives, construction of a SERF building is not justified. A CD-0 Mission Need document should not be developed.
2. Based on the age of buildings remaining at TRA and the potential for significant life cycle cost savings, a new office building should be constructed at TRA. The TRA Administration Building Project Mission Need Document⁴ issued to the office of Nuclear Energy (NE) in March 2001 provides for “Replacement/Consolidation of the TRA Administration Spaces/Functions.” This document addresses TRA as a whole, including workers not able to relocate to a remote SERF building. A facility designed to accommodate 220 occupants is required. Appendix A lists life cycle capital costs avoided by this project through 2010. The construction of this facility is clearly justified as described in the Mission Need document and it is recommended that DOE should pursue appropriate funding.

2. GENERAL PRELIMINARY TECHNICAL PERFORMANCE REQUIREMENTS

To support analysis of SERF alternatives, general preliminary technical-performance requirements were defined. An engineering analysis of the anticipated occupants' needs was performed and a listing of the possible system level requirements was identified. Because of uncertainties related to size, location, and function, only very general information was included. A SERF project would include:

- Expansion to the existing parking/bus lot at INTEC and/or TRA
- Connection to existing utilities at INTEC and/or TRA
- Relocation of occupants and equipment from the existing buildings to the SERF upon completion.

An engineering analysis of the anticipated occupants' needs was performed and a listing of the possible system level requirements was identified.

Assumptions used for risk assessment:

1. A SERF would be a Line-Item Construction Project owned by DOE
2. A SERF would be located immediately outside the fence near the main entrance to INTEC and/or TRA
3. The asphalt apron adjacent to a SERF would become the bus transfer location for the INEEL (applies only to a SERF located at INTEC)
4. A SERF would become the location of the main food preparation facility at the INEEL, replacing CFA-662 (applies only to a SERF located at INTEC)
5. SERF would become the food service facility for INTEC, replacing CPP-652 (applies only to a SERF located at INTEC)
6. The structure would be a one- or two-story structure similar to the Engineering Research Office Building (EROB)
7. The project would be cost and scope driven, not schedule driven.

2.1 General

The design life of the SERF building's shell and frame would be at least 45 years.

The design life of the SERF building's shell and frame would be at least 45 years. The building would need to last the expected duration of the existing programs.

It was anticipated that the SERF would be located at the northwest corner of INTEC and would consolidate existing functions from CFA, TRA and INTEC. This tentative location was chosen to take advantage of the centralized location of INTEC, to CFA and TRA. The actual location would be part of the studies conducted during the conceptual design.

A SERF would incorporate energy efficient systems to meet not only Title 10 Code of Federal Regulations (CFR) 435, "Energy Conservation Voluntary Performance Standards for New Buildings, Mandatory for Federal Buildings," but alternatives that can be applied without increasing the life-cycle cost of the facility. The U.S. Green Building council maintains a Leadership Energy and Environmental Design (LEED) evaluation program that measures the use of green building concepts. Emphasis would be placed, where practical, on incorporating elements of the program that will lead to a LEED-certified facility. The reason for these requirements is to ensure meeting the INEEL commitments for reducing site greenhouse emissions by 90% from 1990 levels.

The building would be compliant with all the applicable codes and standards.

2.2 Architectural

The exterior of a SERF would be in appearance to the exterior of the EROB facility in town.

The exterior of a SERF would be aesthetically integrated with surrounding buildings and the environment similar in appearance to the exterior of the EROB facility in town. This is to provide the personnel with a modern facility conducive to improved worker efficiency and effectiveness while reducing building operations and maintenance costs.

The use of natural lighting would be maximized throughout the building. The use of natural lighting provides a more open atmosphere, thereby increasing occupant productivity, and decreases the use of artificial light and its associated energy consumption.

2.3 Functional Areas

A SERF would consist primarily of office space adjacent to reconfigurable multiuse areas for cafeteria service, meetings, distance learning, and training. In addition to these areas, there may be a food preparation area, a satellite data center, a bus depot, a reproduction center, and the appropriate storage, restrooms, lockers, showers, and mini-kitchen areas to support the people occupying this building.

2.3.1 Offices

The number would be based on the number of identified SERF candidate occupants to be moved with the closing of related existing high-maintenance buildings.

2.3.2 Common use space

Approximately half of the floor area would be common use space. Specific types of space include the following:

2.3.2.1 Cafeteria

- A food preparation area is required to replace similar functions in buildings identified for replacement by the SERF
- For a SERF at INTEC, the food preparation area would be approximately 12,000 ft² and would replace the existing facility at CFA with a state-of-the-art food preparation area that is cost effective to maintain and more centrally located
- The food preparation area would contain the following functions or area:
 - Dishwashing
 - Salad preparation
 - Preparation for food for the steam table
 - All baking
 - Food shipping and receiving dock
 - Food storage area
 - Walk-in freezer for frozen foods
 - Walk-in cooler for dairy
 - Walk-in cooler for meats
 - Walk-in cooler for vegetables and fruits
 - Walk-in cooler for bakery
 - A scramble/self-service area
 - Dish storage
 - Cashier area
 - Two offices
 - Break room
 - Vending area
- For a SERF at INTEC, the dining room would accommodate 300 people and shall replace the existing facility at INTEC
- Emphasis would be placed on maximizing the flexibility for dividing or segregating seating areas to allow varied configurations in size and use of dining areas during nonoperation cafeteria hours such as for the bus depot gathering areas, meetings, and other needs.

A SERF would consist primarily of office space adjacent to reconfigurable multiuse areas for cafeteria service, meetings, distance learning, and training. In addition to these areas, there may be a food preparation area, a satellite data center, a bus depot, a reproduction center.

2.3.2.2 **Conference Rooms and Distance Learning**

- Areas would be provided for meetings, training, and distance learning
- These rooms would, where practical, be used for multi-purposes and therefore would be collocated with the food service and conference room areas
- A large conference room that could seat up to 300 people would be included to replace the existing facility at CFA and would be furnished with the equipment to provide distance learning capabilities (applies only to a single SERF at INTEC)
- Several rooms would be equipped for distance learning and offsite conferencing capability plus areas for the training that is presently being done in the buildings designated to be retired
- The distance learning rooms would be furnished with such items as ceiling-mounted overhead projection equipment, connections to the satellite data center, wall-mounted screens, tables, and seating. This supports the maximum use of space, by maintaining the capability to meet large volume needs or facilitate smaller volume on a day-by-day basis
- Additionally smaller conference rooms would be needed to accommodate meetings.

2.3.2.3 *Bus Depot.* The bus depot would replace the existing high-maintenance building at CFA-685, with the functions better located following the relocation of people from CFA and TRA to INTEC. (This only applies to a single large SERF building at INTEC.)

- The bus depot would be sized to accommodate an area for bus riders to gather during inclement weather, a bus ticket sales counter, and space for dispatching personnel
- The gathering space would be co-located with the cafeteria dining room
- The taxi dispatcher within this facility would have full view of arriving buses so that he/she could assist with passenger needs as to taxi service and departing shuttle buses that operate offsite and to and from surrounding communities.

2.4 **Utilities**

Connections would be made with the existing sewer, telephone, water, electricity, and data transmission lines that are presently in the area.

- For critical systems there would be an onsite uninterruptible power supply.
- A standby generator would be provided for emergency lighting and system power.

Connections would be made with the existing sewer, telephone, water, electricity, and data transmission lines that are presently in the area.

- Raceways would be used for the power, data, and telecommunication systems. This is to allow for reconfiguration of lines and upgrading these utilities as technology and facility needs change.
- The telecommunications room would have sufficient heating, ventilating, and air conditioning to support an Ethernet router, voice and data patch panels, servers, and an uninterruptible power supply.

2.5 Structural

Standard building and construction codes would be used for a SERF facility.

Standard building and construction codes would be used for a SERF facility.

2.6 Safety

It is anticipated that the public will routinely accept the hazard classification for the SERF. Therefore, neither a Preliminary Safety Analysis Report nor a Safety Analysis Report would be required. The principal hazards associated with a SERF project would be standard industrial hazards. The hazards would be mitigated through the use of safe operating procedures and adherence to 29 CFR 1910 and 10 CFR 1926 (as applicable).

- Additional safety controls would be administered through the INEEL construction work procedures such as safe work permits, lockout/tagout, construction subcontractors requirements manual, and job safety analysis
- Life safety systems would include an addressable fire alarm system, evacuation system, and reporting panels.

2.7 Security

A SERF would be located outside the area security fence and accommodate the normal security functions of a site office building such as electronic badge access to the building to ensure normal property and personnel protection.

A SERF would be located outside the area security fence and accommodate the normal security functions of a site office building

3. SCHEDULE AND MILESTONES

Life cycle analysis assumed typical LICP performance periods and milestones for the SERF project as shown below in Table 7. Conceptual design for the project would be performed in FY 2002 and 2003. The expenditure of capital funding for design would begin in FY 2004 with construction starting in FY 2005. Project closeout would occur in FY 2007. In addition, a possible project schedule for a SERF was provided as indicated by Figure 1.

Table 7. Typical LICP milestones and major phases.

Activity	Start	End
Critical Decision 0	-	1 st Q FY 2002
Project and Engineering Design (PED) Data Sheet	-	3 rd Q FY 2002
Conceptual Design	2 nd Q FY 2002	1 st Q FY 2003
Construction Project Data Sheet	-	3 rd Q FY 2003
Critical Decision 1	-	2 nd Q FY 2003
Definitive Design	1 st Q FY 2004	2 nd Q FY 2005
Critical Decision 2	-	3 rd Q FY 2004
Critical Decision 3	-	2 nd Q FY 2005
Construction	4 th Q FY 2005	4 th Q FY 2006
Critical Decision 4	-	1 st Q FY 2007
Testing/Startup	4 th Q FY 2006	1 st Q FY 2007
Project Closeout	-	2 nd Q FY 2007

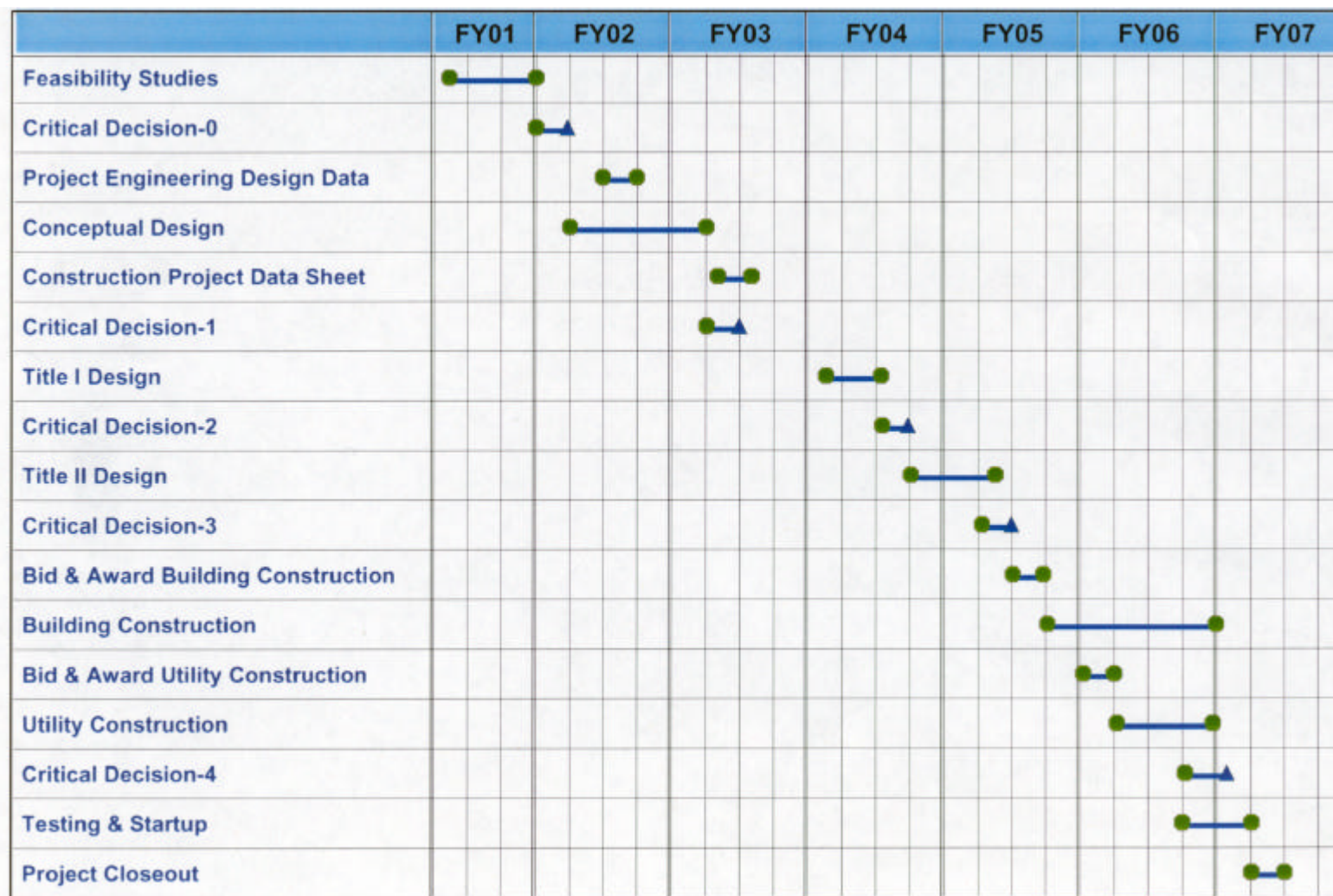


Figure 1. Typical LICP Project Schedule for SERF Alternatives.

4. PROJECT COST

A Planning Cost Estimate was developed for the original 700 occupant INEEL SERF project located at INTEC (see Appendix B). This information validates project costs used for life cycle cost analysis of alternatives.

5. ACQUISITION STRATEGY

5.1 SERF Constructed as a LICP

For alternatives assuming a SERF constructed as a LICP, the following strategy applies. The acquisition strategy for design would be to use the INEEL in-house Facility Engineering organization to perform the conceptual design for the SERF. The title design activity would be divided into two construction packages, one for the building and one for the utilities that pass from inside the security fence to the SERF located outside. The title design of the utility package would be performed by the INEEL in-house Facility Engineering organization. A determination of the appropriate method to obtain the title design of the building would be made during the conceptual design. It could be performed by the in-house Facility Engineering organization, an external firm, or as part of a design-build subcontract.

Construction services for the utility package would be obtained using a fixed price subcontract. The firm performing this work would be working both inside and outside the area security fence.

Whether the building would be obtained using a design-bid-build approach or a design-build strategy would be determined during conceptual design. Since the building would likely be located outside of the security fence, it may be possible to isolate the construction area of the building to permit application of commercial standards to the design and construction.

INEEL operations and engineering personnel would perform startup testing.

5.2 Lease Alternative

An alternative that assumed construction of a SERF by an independent developer for acquisition as a leased facility was also considered. However, there are restrictions in Office of Management and Budget Circular A-11 that appear to prohibit obtaining a SERF as a leased facility. These restrictions would prohibit either a capital (long term) or operating (short-term) lease. It may be possible to obtain a waiver to the restrictions, although the circular indicates waivers will be rare. It may also be possible to work with the prohibitions to find ways to creatively meet the requirements stipulated in them.

With a leased facility, the INEEL would not directly be responsible for the maintenance of the building. The private sector owner would be responsible to operate and maintain the building.

An alternative that assumed construction of a SERF by an independent developer for acquisition as a leased facility was also considered.

6. PRELIMINARY RISK ASSESSMENT

A SERF preliminary risk assessment was conducted. The purpose of this assessment was to identify those risks that have the possibility of negating assumptions or criteria that form the basis for a possible SERF. A Risk Screening Checklist that identifies categories and criteria for risk consideration was used for the assessment to identify areas of risk.

The following is a summary of risk areas identified.

Risk: Risk affects from the uncertainty of funding availability for the SERF.

This is the potential that the project would not be funded despite a favorable payback period because the existing funding plan for Environmental Management (EM) is not adequate to meet existing commitments in the Settlement Agreement.

Risk: The technical scope (number of personnel to design for) cannot be well defined.

It is not clear what impact the work force restructuring effort now underway will have on the number of personnel available to relocate to a SERF.

The number of INEEL site workers that may be able to be moved to Idaho Falls facilities is unknown at this time.

A third scope concern is that if EM funding is significantly decreased from planned levels, the number of personnel available to move into a SERF could be reduced even more than currently identified.

Risk: The future direction that implementation of Standard (STD)-101 may take is uncertain. It is also unknown whether it would be applied to a SERF facility or not.

If STD-101 is not applied, and it is allowed to be built as if it were a private facility in Idaho Falls, there could be significant savings. However, because STD-101 was created in response to Integrated Safety Management System (ISMS) implementation, it is not likely to be avoided.

7. PRELIMINARY NEPA AND PERMITTING STRATEGY

The following assumptions were applied:

A SERF project would qualify for Categorical Exclusion to further National Environmental Policy Act (NEPA) documentation under 10 CFR 1021, Appendix B to Subpart D, Subsections B1–15, “Siting/construction/operation of support buildings/support structures.” An Environmental Assessment would not be required.

Required permitting would be identified by Environmental Affairs as part of the Environmental Checklist process. Actions would be required for storm water pollution prevention, soil disturbances, potable water modifications, culture resource clearances, and other related permits. There are no new air emission sources.

8. PROJECT TECHNICAL AND ORGANIZATIONAL INTERFACES

One of the results of performing a SERF project would be to abandon a significant number of the CFA, INTEC, and TRA buildings. This could have an added benefit of reducing the length of utility service lines requiring maintenance. Future upgrades would not be required for the abandoned buildings and utilities, and they could be inactivated reducing future upgrade, maintenance, and operations costs. The costs to inactivate the facilities would be borne by the tenant group or landlord.

Appendix A

Avoided Life Cycle Capital Needs

Appendix A
Avoided Life Cycle Capital Needs

APPENDIX A: Avoided Infrastructure Life-Cycle Capital Needs (\$K) FY02-FY10 Resulting from TRA Administration Building LICP
(Construction of a SERF building is not justified at this time)

Infrastructure Project/Activity	Funding Type	Funding Years	FY-02	FY-03	FY-04	FY-05	FY-06	FY-07	FY-08	FY-09	FY-10
Repair Roof, TRA-652	GPP	2002	52								
Cooling Upgrade, TRA-653	GPP	2002	200								
Roof Repair, TRA-649	GPP	2002	150								
New Roof, TRA-653	GPP	2003		700							
Mechanical , Electrical Upgrade, TRA-649	GPP	2003		1,100							
New Roof, TRA-635	GPP	2004			880						
New Roof, TRA-647	GPP	2004			480						
New Roof, TRA-667	GPP	2004			600						
Mechanical, Electrical Upgrade, TRA-667	GPP	2006					775				
Mechanical, Electrical Upgrade, TRA-603	GPP	2007						800			
New Roof, TRA-614	GPP	2007						200			
New Roof, TRA-638	GPP	2007						200			
Mechanical, Electrical Upgrade, TRA-614	GPP	2008							1,100		
Heating Upgrade, TRA-614	GPP	2008							465		
Heating Upgrade, TRA-635	GPP	2008							675		
Mechanical, Electrical Upgrade, TRA-637	GPP	2008							100		
Heating Upgrade, TRA-637	GPP	2008							50		
Mechanical, Electrical Upgrade, TRA-638	GPP	2008							500		
Heating Upgrade, TRA-638	GPP	2008							150		
Heating, Electrical Upgrade, TRA-647	GPP	2008							750		
Mechanical, Electrical Upgrade, TRA-652	GPP	2008							1,100		
Heating Upgrade, TRA-603	GPP	2009								750	
Mechanical, Electrical Upgrade, TRA-635	GPP	2010									1,100
Mechanical Upgrade, TRA-647	GPP	2010									500
Infrastructure Project Totals			402	1,800	1,960	-	775	1,200	4,890	750	1,600

Total Avoided Life Cycle Capital Costs Through FY 2010 = \$13,377 K
(From Mission Need Document, TRA Administration Building Project, March 2001)⁴

Appendix B

ROM/Planning Cost Estimate

Appendix B

ROM/Planning Cost Estimate Dated August 8, 2001

A ROM/Planning Cost Estimate was completed for Alternative 2, (Build a LICP SERF building at INTEC). This estimate provided validation of the cost estimate used by engineering in the life cycle cost analysis. It was not considered cost effective to complete cost estimates at this level of detail for the other LICP related alternatives. Other LICP costs provided by engineering for life cycle cost analysis were considered to be of acceptable accuracy for supporting the decision/recommendation process.

Bud Olsen 1
60640

Idaho National Engineering and Environmental Laboratory



INTEROFFICE MEMORANDUM

Date: August 14, 2001

To: S. R. Withers MS 3655 6-7845

From: S. N. Wasley MS 3655 6-3620

Subject: SITE ENGINEERING AND RESOURCE FACILITY (SERF)

Estimating Services has prepared an ROM/Planning Cost Estimate for the subject project. This cost includes direct and indirect construction costs, conceptual, project management, construction management, quality assurance, project design costs, contingency, escalation, material handling and G&A. For more detailed information, please refer to the Cost Estimate Support Data Recapitulation form.

Attached for your review are the Project Summary Report, the Cost Estimate Support Data Recapitulation form, and Detailed Estimate Sheets.

Due to minimal detail and scoping definition, this estimate is considered a "Planning" estimate and is not intended to be used to establish a cost baseline.

<u>Confidence Level</u>	<u>65%</u>	<u>85%</u>
<u>Building</u>		
Total Estimated Costs (TEC)	\$31,839,539	
Other Project Costs (OPC)	1,694,954	
Total Project Costs (TPC)	33,534,493	
Round to	\$33,500,000	\$36,100,000
<u>Utilities</u>		
Total Estimated Costs (TEC)	\$1,793,220	
Other Project Costs (OPC)	60,216	
Total Project Costs (TPC)	1,853,436	
Round to	\$1,850,000	\$1,990,000
Total Project Cost (TPC)	\$35,350,000	\$38,090,000

If you have any questions or comment, please contact me at 526-3620.

SNW

S. R. Withers
August 14, 2001
Page 2

Attachments

cc: J. L. Leavitt, MS 5312
R. D. Sellers, MS 2080
Estimate File 8565
S. N. Wasley File (SNW-21-01)

Uniform File Code: 8309

Disposition Authority: A17-31-a-1

Retention Schedule: Until dismantlement or disposal of facility, equipment, system, or process; or when superseded or obsolete, whichever is earlier.

NOTE: Original disposition authority, retention schedule, and Uniform Filing Code applied by the sender may not be appropriate for all recipients. Make adjustments as needed.

Appendix C

References

Appendix C

References

Mission Need Document, TRA Administration Building Project, INEEL/INT-2001-00298, March 2001.

Idaho National Engineering and Environmental Laboratory, *INEEL Infrastructure Long-Range Plan*, INEEL/EXT-2000-01052, February 2001.

Idaho National Engineering and Environmental Laboratory, *FY 2001–FY 2005 Institutional Plan*, INEEL/EXT-2000-0462, August 2000.

Marty Plum et al., *INTEC Thermal Energy Study – Final Report*, INEEL/EXT-99-00875, September 1999.

Appendix D
Life Cycle Cost Analysis
Summary Spreadsheets

										1	2	3	4	5	6	7	8		
										2002	2003	2004	2005	2006	2007	2008	2009		
										1.024	1.053	1.082	1.112	1.144	1.176	1.209	1.242		
										Discounted Annual Cost									
										Discount factor 0.893									
										Annual Costs									
										Escalated Annual Cost									
										\$69,850	\$7,871	\$7,823	\$2,289	\$2,251	\$3,683	\$2,177	\$2,211	\$2,304	
										\$179,532	\$8,153	\$8,370	\$2,673	\$2,768	\$4,748	\$2,968	\$3,173	\$3,483	
										\$182,513	\$8,288	\$8,675	\$2,673	\$2,798	\$4,801	\$2,968	\$3,194	\$3,556	
Cumulative Discounted LCC											\$7,871	\$15,694	\$17,984	\$20,235	\$23,918	\$26,095	\$28,305	\$30,610	
Do Nothing (Feb'01 Staffing Scenario)										cost / sq ft	% of acquisition cost	\$ / square foot	annual increase	Min	Target	Max			
CFA	AREA Sq. Ft	122,900																	
	Capital Requests	\$15,372								\$15,372		\$5,645	\$5,788	\$0	\$0	\$230	\$0	\$100	\$300
	capital acquisition	\$0.00								\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title I	\$0.00	77.00%			5.8%	10.0%	14.5%		\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title II	\$0.00	14.00%			12.0%	14.0%	16.0%		\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title III	\$0.00								\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	capital maintenance	\$39,220								\$39,220		\$0	\$0	\$0	\$0	\$1,672	\$0	\$0	\$0
	minor remodel every 5 yr.	\$1,321,175	3.00%	\$10.75	4.0%	2.5%	3.0%	5.0%		\$18,255		\$0	\$0	\$0	\$0	\$1,672	\$0	\$0	\$0
	minor remodel every 10 yr.	\$1,855,790	5.00%	\$15.10	4.0%	3.0%	5.0%	7.0%		\$12,832		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	major remodel every 20 yr.	\$3,711,580	10.00%	\$30.20	4.0%	8.0%	10.0%	12.0%		\$8,133		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	direct costs (associated with direct operations)	\$32,128								\$32,128		\$713	\$730	\$781	\$773	\$796	\$819	\$844	\$869
	heating / cooling	\$119,213		\$9.97	3.00%	2.0%	3.0%	4.0%		\$5,546		\$123	\$126	\$130	\$133	\$137	\$142	\$146	\$150
	lighting	\$82,343		\$6.67	3.00%	2.5%	3.0%	5.0%		\$4,187		\$85	\$88	\$91	\$94	\$97	\$101	\$104	\$108
	electrical loads due to operations not included																		
	cleaning	\$368,700		\$3.00	3.00%	2.0%	3.0%	5.0%		\$18,198		\$381	\$391	\$404	\$418	\$432	\$446	\$461	\$477
	other utilities	\$122,900		\$1.00	1.00%	0.50%	1.0%	2.0%		\$4,195		\$124	\$125	\$127	\$128	\$129	\$131	\$133	\$134
	indirect costs	\$92,811								\$92,811		\$1,795	\$1,852	\$1,922	\$1,994	\$2,070	\$2,148	\$2,230	\$2,314
	planned maintenance	\$556,737	1.5%	\$4.53	3.00%	2.5%	3.8%	5.0%		\$29,694		\$578	\$598	\$619	\$642	\$666	\$691	\$717	\$744
	unplanned maintenance	\$742,316	2.0%	\$6.04	4.00%	3.5%	4.2%	5.0%		\$43,098		\$774	\$802	\$836	\$871	\$908	\$947	\$987	\$1,028
	security	\$245,800		\$2.00	3.00%	2.0%	3.0%	4.0%		\$11,439		\$253	\$259	\$267	\$275	\$283	\$292	\$301	\$310
	safety / fire protection	\$184,350		\$1.50	3.00%	2.0%	3.0%	4.0%		\$8,579		\$190	\$194	\$200	\$206	\$212	\$219	\$225	\$232
	post-operation / DD&D																		
	demolition	\$11,134,740	30.0%	\$90.60	3.00%	2.5%	3.0%	5.0%		\$11,524		\$11,860	\$12,275	\$12,705	\$13,148	\$13,609	\$14,088	\$14,579	

										9	10	11	12	13	14	15	16		
										2010	2011	2012	2013	2014	2015	2016	2017		
										1.277	1.313	1.350	1.387	1.425	1.466	1.507	1.550		
										Discounted Annual Cost									
										Discount factor 0.893									
										Annual Costs									
										Escalated Annual Cost									
										\$69,850	\$2,228	\$5,010	\$2,004	\$1,971	\$2,102	\$1,980	\$3,333	\$1,846	
										\$179,532	\$3,546	\$8,396	\$3,536	\$3,663	\$4,114	\$4,080	\$7,232	\$4,218	
										\$182,513	\$3,616	\$8,434	\$3,536	\$3,663	\$4,251	\$4,150	\$7,476	\$4,218	
Cumulative Discounted LCC											\$32,838	\$37,847	\$39,851	\$41,822	\$43,925	\$45,905	\$48,238	\$51,044	
Do Nothing (Feb'01 Staffing Scenario)										cost / sq ft	% of acquisition cost	\$ / square foot	annual increase	Min	Target	Max			
CFA	AREA Sq. Ft	122,900																	
	Capital Requests	\$15,372								\$15,372		\$250	\$120	\$0	\$0	\$320	\$150	\$484	\$0
	capital acquisition	\$0.00								\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title I	\$0.00	77.00%			5.8%	10.0%	14.5%		\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title II	\$0.00	14.00%			12.0%	14.0%	16.0%		\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title III	\$0.00								\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	capital maintenance	\$39,220								\$39,220		\$0	\$4,862	\$0	\$0	\$0	\$0	\$2,676	\$0
	minor remodel every 5 yr.	\$1,321,175	3.00%	\$10.75	4.0%	2.5%	3.0%	5.0%		\$18,255		\$0	\$2,715	\$0	\$0	\$0	\$0	\$2,676	\$0
	minor remodel every 10 yr.	\$1,855,790	5.00%	\$15.10	4.0%	3.0%	5.0%	7.0%		\$12,832		\$0	\$2,747	\$0	\$0	\$0	\$0	\$0	\$0
	major remodel every 20 yr.	\$3,711,580	10.00%	\$30.20	4.0%	8.0%	10.0%	12.0%		\$8,133		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	direct costs (associated with direct operations)	\$32,128								\$32,128		\$594	\$921	\$949	\$977	\$1,006	\$1,036	\$1,067	\$1,098
	heating / cooling	\$119,213		\$9.97	3.00%	2.0%	3.0%	4.0%		\$5,546		\$155	\$159	\$164	\$169	\$174	\$179	\$185	\$190
	lighting	\$82,343		\$6.67	3.00%	2.5%	3.0%	5.0%		\$4,187		\$112	\$115	\$120	\$124	\$128	\$133	\$137	\$142
	electrical loads due to operations not included																		
	cleaning	\$368,700		\$3.00	3.00%	2.0%	3.0%	5.0%		\$18,198		\$492	\$509	\$526	\$543	\$561	\$580	\$600	\$619
	other utilities	\$122,900		\$1.00	1.00%	0.50%	1.0%	2.0%		\$4,195		\$136	\$137	\$139	\$140	\$142	\$144	\$145	\$147
	indirect costs	\$92,811								\$92,811		\$2,402	\$2,493	\$2,588	\$2,686	\$2,789	\$2,895	\$3,005	\$3,119
	planned maintenance	\$556,737	1.5%	\$4.53	3.00%	2.5%	3.8%	5.0%		\$29,694		\$772	\$801	\$831	\$863	\$895	\$929	\$964	\$1,000
	unplanned maintenance	\$742,316	2.0%	\$6.04	4.00%	3.5%	4.2%	5.0%		\$43,098		\$1,072	\$1,117	\$1,165	\$1,214	\$1,265	\$1,319	\$1,375	\$1,433
	security	\$245,800		\$2.00	3.00%	2.0%	3.0%	4.0%		\$11,439		\$319	\$328	\$339	\$348	\$359	\$370	\$381	\$392
	safety / fire protection	\$184,350		\$1.50	3.00%	2.0%	3.0%	4.0%		\$8,579		\$239	\$246	\$254	\$261	\$269	\$277	\$285	\$294
	post-operation / DD&D																		
	demolition	\$11,134,740	30.0%	\$90.60	3.00%	2.5%	3.0%	5.0%		\$15,089		\$15,617	\$16,164	\$16,730	\$17,315	\$17,921	\$18,548	\$19,198	

Alternative 1, DO NOTHING (CFA LCC Analysis Summary Sheet 1)

										17	18	19	20	21	22	23	24	
										2018	2019	2020	2021	2022	2023	2024	2025	
										1,593	1,639	1,683	1,730	1,779	1,829	1,880	1,935	
Discounted Annual Cost										\$89,858	\$1,827	\$1,983	\$1,815	\$7,279	\$1,703	\$1,085	\$996	\$995
Discount factor 0.063											0.0156	0.0047	0.0049	0.0048	0.0041	0.0031	0.0024	0.0019
Annual Costs										\$179,532	\$4,395	\$5,023	\$4,841	\$20,446	\$3,379	\$3,266	\$3,437	
Excluded Annual Cost										\$162,513	\$4,410	\$5,338	\$4,944	\$20,446	\$5,037	\$3,628	\$3,332	\$3,568
Cumulative Discounted LCC											\$52,911	\$54,894	\$56,708	\$63,987	\$65,690	\$66,775	\$67,771	\$68,766
										cost / sqft	% of acquisition cost	\$ / square foot	annual increase	Min	Target	Max		
CFA	AREA Sq. Ft	122,900																
	Capital Requests	\$15,372								\$15,372	\$25	\$495	\$150	\$0	\$0	\$300	\$75	\$130
	capital acquisition	\$0.00								\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title I	\$0.00	10.100%							\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title II	\$0.00	14.100%							\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title III	\$0.00								\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	capital maintenance									\$79,320	\$0	\$0	\$0	\$15,585	\$0	\$0	\$0	\$0
	minor remodel every 5 yr.	\$1,321,175	2.800%	\$10.75	4.0%	2.5%	3.0%	5.0%		\$16,255	\$0	\$0	\$0	\$3,387	\$0	\$0	\$0	\$0
	minor remodel every 10 yr.	\$1,855,790	4.000%	\$15.10	4.0%	3.0%	5.0%	7.0%		\$12,432	\$0	\$0	\$0	\$4,068	\$0	\$0	\$0	\$0
	major remodel every 20 yr.	\$3,711,580	10.000%	\$30.20	4.0%	8.0%	10.0%	12.0%		\$6,133	\$0	\$0	\$0	\$8,133	\$0	\$0	\$0	\$0
	direct costs (associated with direct operations)									\$32,128	\$1,132	\$1,166	\$1,201	\$1,237	\$1,275	\$775	\$799	\$823
	heating / cooling	\$119,213		\$0.97	2.000%	2.0%	3.0%	4.0%		\$5,548	\$190	\$202	\$208	\$214	\$221	\$134	\$138	\$142
	lighting	\$82,343		\$0.67	2.500%	2.5%	3.0%	5.0%		\$4,187	\$147	\$152	\$157	\$163	\$169	\$103	\$107	\$110
	advanced loads (curb open doors not included)																	
	cleaning	\$366,700		\$3.00	3.000%	2.0%	3.0%	5.0%		\$18,198	\$640	\$661	\$694	\$705	\$730	\$445	\$460	\$475
	other utilities	\$122,900		\$1.00	1.100%	0.50%	1.0%	2.0%		\$4,195	\$149	\$151	\$152	\$154	\$158	\$93	\$94	\$95
	indirect costs									\$82,811	\$2,230	\$3,362	\$3,490	\$3,624	\$3,762	\$2,304	\$2,393	\$2,484
	planned maintenance	\$556,737	1.5%	\$4.53	3.700%	2.5%	0.8%	5.0%		\$29,694	\$1,698	\$1,077	\$1,118	\$1,160	\$1,203	\$737	\$764	\$793
	unplanned maintenance	\$742,316	2.0%	\$6.04	4.200%	3.5%	4.2%	5.0%		\$43,898	\$1,494	\$1,567	\$1,623	\$1,691	\$1,762	\$1,084	\$1,130	\$1,178
	security	\$245,800		\$2.00	3.000%	2.0%	3.0%	4.0%		\$11,435	\$404	\$416	\$429	\$441	\$455	\$276	\$285	\$293
	safety / fire protection	\$184,350		\$1.50	3.000%	2.0%	3.0%	4.0%		\$6,579	\$303	\$312	\$321	\$331	\$341	\$207	\$213	\$220
	post-operation / DD&D																	
	demolition	\$11,134,740	30.0%	\$90.60	5.400%	2.5%	3.0%	5.0%		\$19,869	\$20,965	\$21,285	\$22,030	\$22,801	\$13,924	\$14,411	\$14,915	

							25	26	27	28	29	30	31	32	33	34		
							2026	2027	2028	2029	2030	2031	2032	2033	2034	2035		
							1.987	2.042	2.100	2.158	2.219	2.281	2.345	2.410	2.478	2.547		
Discounted Annual Cost							\$80,858	\$2,108	\$928	\$961	\$899	\$940	\$3,059	\$857	\$881	\$840	\$618	
Discount factor							0.063	0.2958	0.2611	0.2480	0.2365	0.2267	0.2184	0.2097	0.1993	0.1879	0.1728	
Annual Costs							\$179,532	\$7,668	\$3,552	\$3,876	\$3,816	\$4,205	\$14,404	\$4,249	\$4,600	\$4,616	\$3,578	
Escalated Annual Cost							\$182,933	\$7,790	\$3,552	\$4,091	\$3,816	\$4,510	\$14,404	\$4,249	\$4,875	\$4,690	\$3,578	
Cumulative Discounted LCC							\$70,874	\$71,802	\$72,763	\$73,662	\$74,602	\$77,661	\$78,518	\$79,400	\$80,239	\$80,858		
Do Nothing (Feb'01 Staffing Scenario)																		
CFA	AREA Sq. Ft	122,900																
Capital Requests		\$15,372						\$15,372	\$120	\$0	\$195	\$0	\$290	\$0	\$0	\$195	\$50	\$0
capital acquisition		\$0.00						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Title I		\$0.00	10.80%		5.8%	10.0%	14.8%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Title II		\$0.00	14.90%		12.0%	14.0%	16.0%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Title III		\$0.00						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
capital maintenance								\$36,228	\$4,120	\$0	\$0	\$0	\$10,364	\$0	\$0	\$0	\$0	\$0
minor remodel every 5 yr.	\$1,321,175	3.90%	\$10.75	4.0%	2.5%	3.0%	5.0%	\$18,255	\$4,120	\$0	\$0	\$0	\$4,285	\$0	\$0	\$0	\$0	\$0
minor remodel every 10 yr.	\$1,855,790	3.00%	\$15.10	4.0%	3.0%	5.0%	7.0%	\$12,832	\$0	\$0	\$0	\$0	\$0,019	\$0	\$0	\$0	\$0	\$0
major remodel every 20 yr.	\$3,711,580	12.00%	\$30.20	4.0%	8.0%	10.0%	12.0%	\$6,133	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
direct costs (associated with direct operations)								\$32,128	\$848	\$874	\$901	\$928	\$957	\$986	\$1,016	\$1,048	\$1,080	\$841
heating / cooling	\$119,213		\$0.97	3.00%	2.0%	3.0%	4.0%	\$5,348	\$146	\$151	\$155	\$160	\$165	\$170	\$175	\$180	\$185	\$144
lighting	\$62,343		\$0.67	3.00%	2.5%	3.0%	5.0%	\$4,187	\$114	\$118	\$122	\$127	\$131	\$136	\$140	\$145	\$150	\$118
electrical loads due to operations not inclusive																		
cleaning	\$368,700		\$3.00	3.00%	2.0%	3.0%	5.0%	\$18,198	\$491	\$507	\$524	\$542	\$560	\$578	\$598	\$618	\$638	\$499
other utilities	\$122,900		\$1.00	3.16%	0.50%	1.0%	2.0%	\$4,105	\$86	\$97	\$99	\$100	\$101	\$102	\$103	\$105	\$106	\$81
indirect costs								\$92,811	\$2,579	\$2,678	\$2,781	\$2,888	\$2,998	\$3,114	\$3,233	\$3,357	\$3,487	\$2,737
planned maintenance	\$556,737	1.5%	\$4.53	2.76%	2.5%	3.8%	5.0%	\$29,684	\$823	\$854	\$885	\$920	\$964	\$990	\$1,028	\$1,066	\$1,106	\$868
unplanned maintenance	\$742,316	2.0%	\$6.04	4.20%	3.5%	4.2%	5.0%	\$43,698	\$1,228	\$1,280	\$1,334	\$1,390	\$1,449	\$1,511	\$1,575	\$1,641	\$1,711	\$1,348
security	\$245,000		\$2.00	3.00%	2.0%	3.0%	4.0%	\$11,439	\$302	\$311	\$320	\$330	\$340	\$350	\$361	\$371	\$382	\$298
safety / fire protection	\$184,350		\$1.90	3.00%	2.0%	3.0%	4.0%	\$8,579	\$226	\$233	\$240	\$247	\$255	\$263	\$270	\$278	\$287	\$223
post-operation / DD&D																		
decommission	\$11,134,740	30.0%	\$90.00	3.00%	2.5%	3.0%	5.0%		\$15,437	\$15,978	\$16,537	\$17,116	\$17,715	\$18,335	\$18,976	\$19,641	\$20,328	\$15,904

Alternative 1, DO NOTHING (CFA LCC Analysis Summary Sheet 2)

										1	2	3	4	5	6	7	8
										2002	2003	2004	2005	2006	2007	2008	2009
										1.024	1.053	1.082	1.112	1.144	1.176	1.209	1.242
										Discounted Annual Cost							
										\$105,023							
										Discount factor							
										1.000							
										Annual Costs							
										\$247,952							
										\$255,869							
										Escalated Annual Cost							
										\$3,178							
										\$3,125							
										\$5,137							
										\$6,984							
										\$6,559							
										\$8,646							
										\$4,561							
										\$2,206							
										Escalated Annual Cost							
										\$3,178							
										\$6,303							
										\$11,440							
										\$18,425							
										\$24,984							
										\$33,630							
										\$38,191							
										\$40,397							
										Cumulative Discounted LCC							
										cost / sqft							
										% of acquisition cost							
										\$ / square foot							
										annual increase							
										Min							
										Target							
										Max							
										Do Nothing (Feb'01 Staffing Scenario)							
										INTEC							
										AREA Sq. Ft							
										164,000							
										Capital Requests							
										\$23,916							
										capital acquisition							
										\$0.00							
										Title I							
										\$0.00							
										Title II							
										\$0.00							
										Title III							
										\$0.00							
										capital maintenance							
										\$5,763,000							
										minor remodel every 5 yr.							
										\$2,476,400							
										minor remodel every 10 yr.							
										\$4,952,800							
										major remodel every 20 yr.							
										direct costs (associated with direct operations)							
										\$159,000							
										heating / cooling							
										\$109,800							
										lighting							
										electrical loads due to operations not included							
										cleaning							
										other utilities							
										indirect costs							
										planned maintenance							
										unplanned maintenance							
										security							
										safety / fire protection							
										post-operation / DD&D							
										demolition							

										9	10	11	12	13	14	15
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										17	18	19	20	21	22	23	24		
										2018	2019	2020	2021	2022	2023	2024	2025		
										1.593	1.638	1.683	1.730	1.779	1.829	1.880	1.933		
										Discounted Annual Cost	\$105,023	\$1,903	\$2,069	\$2,292	\$8,983	\$1,885	\$1,755	\$1,727	\$1,948
										Discount factor	0.950	0.9156	0.8947	0.8769	0.8593	0.8381	0.8211	0.8040	0.7885
										Annual Costs	\$247,962	\$4,578	\$5,243	\$6,114	\$5,576	\$5,467	\$5,665	\$6,726	\$7,523
										Escalated Annual Cost	\$253,969	\$4,678	\$5,561	\$6,934	\$25,233	\$5,610	\$5,467	\$5,665	\$7,523
Cumulative Discounted LCC											\$64,490	\$66,560	\$68,852	\$77,834	\$79,719	\$81,474	\$83,202	\$85,149	
Do Nothing (Feb'01 Staffing Scenario)										cost / sqft	% of acquisition cost	\$ / square foot	annual increase	Min	Target	Max			
INTEC	AREA Sq. Ft	164,000																	
	Capital Requests	\$23,916																	
	capital acquisition	\$0.00																	
	Title I	\$0.00	10.00%			5.8%	10.0%	14.5%		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	Title II	\$0.00	10.00%			12.6%	14.0%	16.0%		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	Title III	\$0.00								\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	capital maintenance																		
	minor remodel every 5 yr.	\$1,763,000	3.50%	\$10.75	4.0%	2.5%	3.0%	5.0%		\$50,187	\$0	\$0	\$0	\$20,141	\$0	\$0	\$0	\$0	
	minor remodel every 10 yr.	\$2,476,400	5.00%	\$15.10	4.0%	3.0%	5.0%	7.0%		\$22,211	\$0	\$0	\$0	\$3,663	\$0	\$0	\$0	\$0	
	major remodel every 20 yr.	\$4,952,800	10.00%	\$30.20	4.0%	8.0%	10.0%	12.0%		\$17,124	\$0	\$0	\$0	\$5,426	\$0	\$0	\$0	\$0	
	direct costs (associated with direct operations)									\$10,852	\$0	\$0	\$0	\$10,652	\$0	\$0	\$0	\$0	
	heating / cooling	\$159,800		\$0.97	2.00%	2.0%	3.0%	4.0%		\$44,276	\$1,186	\$1,227	\$1,268	\$1,296	\$1,375	\$1,376	\$1,418	\$1,461	
	lighting	\$109,880		\$0.67	2.50%	2.5%	3.0%	5.0%		\$208	\$217	\$218	\$224	\$231	\$238	\$245	\$252		
	electrical loads due to operations not included									\$5,815	\$154	\$169	\$165	\$171	\$177	\$183	\$189	\$195	
	cleaning	\$492,000		\$3.00	3.22%	2.0%	3.0%	5.0%											
	other utilities	\$164,000		\$1.00	1.60%	0.50%	1.0%	2.0%		\$25,205	\$671	\$693	\$716	\$740	\$765	\$790	\$816	\$844	
	indirect costs									\$5,815	\$156	\$158	\$160	\$161	\$163	\$165	\$167	\$169	
	planned maintenance	\$742,920	1.5%	\$4.53	2.70%	2.5%	3.8%	5.0%		\$129,603	\$3,302	\$3,521	\$3,656	\$3,795	\$3,941	\$4,091	\$4,248	\$4,410	
	unplanned maintenance	\$990,560	2.0%	\$6.04	4.22%	3.5%	4.2%	5.0%		\$41,426	\$1,087	\$1,128	\$1,171	\$1,215	\$1,260	\$1,308	\$1,357	\$1,408	
	security	\$328,000		\$2.00	2.00%	2.0%	3.0%	4.0%		\$60,603	\$1,564	\$1,631	\$1,700	\$1,772	\$1,847	\$1,925	\$2,006	\$2,091	
	safety / fire protection	\$246,000		\$1.50	2.00%	2.0%	3.0%	4.0%		\$15,757	\$423	\$436	\$449	\$462	\$476	\$491	\$505	\$520	
	post-operation / DD&D									\$11,817	\$317	\$327	\$337	\$347	\$357	\$368	\$379	\$390	
	demolition	\$14,858,400	30.0%	\$90.60	2.50%	2.5%	3.0%	5.0%											
										\$20,812	\$21,541	\$22,295	\$23,075	\$23,883	\$24,719	\$25,584	\$26,479		

										25	26	27	28	29	30	31	32	33	34			
										2025	2027	2028	2029	2030	2031	2032	2033	2034	2035			
										1.987	2.042	2.100	2.158	2.219	2.281	2.345	2.410	2.478	2.547			
										Discounted Annual Cost	\$100,023	\$2,965	\$1,709	\$1,621	\$1,595	\$1,570	\$4,466	\$1,522	\$1,498	\$1,475	\$1,452	
										Discount factor	0.950	0.2750	0.2611	0.2480	0.2355	0.2237	0.2128	0.2017	0.1916	0.1819	0.1726	
										Annual Costs	\$247,962	\$10,784	\$6,546	\$6,536	\$6,774	\$7,021	\$21,028	\$7,544	\$7,829	\$8,107	\$8,404	
										Escalated Annual Cost	\$253,869	\$10,784	\$6,796	\$6,536	\$6,774	\$7,021	\$21,028	\$7,544	\$7,829	\$8,107	\$8,404	
Cumulative Discounted LCC											\$88,115	\$89,824	\$91,445	\$93,040	\$94,610	\$99,077	\$100,598	\$102,096	\$103,571	\$105,023		
Do Nothing (Feb'01 Staffing Scenario)										cost / sqft	% of acquisition cost	\$ / square foot	annual increase	Min	Target	Max						
INTEC	AREA Sq. Ft	164,000																				
	Capital Requests	\$23,916																				
	capital acquisition	\$0.00																				
	Title I	\$0.00	10.00%			5.8%	10.0%	14.5%		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
	Title II	\$0.00	10.00%			12.0%	14.0%	16.0%		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
	Title III	\$0.00																				
	capital maintenance																					
	minor remodel every 5 yr.	\$1,763,000	3.50%	\$10.75	4.0%	2.5%	3.0%	5.0%		\$50,187	\$4,700	\$0	\$0	\$0	\$0	\$13,750	\$0	\$0	\$0	\$0		
	minor remodel every 10 yr.	\$2,476,400	5.00%	\$15.10	4.0%	3.0%	5.0%	7.0%		\$22,211	\$4,700	\$0	\$0	\$0	\$0	\$5,718	\$0	\$0	\$0	\$0		
	major remodel every 20 yr.	\$4,952,800	10.00%	\$30.20	4.0%	8.0%	10.0%	12.0%		\$17,124	\$0	\$0	\$0	\$0	\$0	\$8,032	\$0	\$0	\$0	\$0		
										\$10,852	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
	direct costs (associated with direct operations)																					
	heating / cooling	\$159,800		\$0.97	2.00%	2.0%	3.0%	4.0%		\$44,276	\$1,505	\$1,551	\$1,599	\$1,648	\$1,698	\$1,750	\$1,804	\$1,860	\$1,917	\$1,976		
	lighting	\$109,880		\$0.67	2.50%	2.5%	3.0%	5.0%		\$7,542	\$260	\$268	\$276	\$284	\$293	\$301	\$310	\$320	\$329	\$339		
										\$5,815	\$203	\$210	\$217	\$225	\$233	\$241	\$249	\$258	\$267	\$276		
	electrical loads due to operations not included																					
	cleaning	\$492,000		\$3.00	2.80%	2.0%	3.0%	5.0%		\$1,505	\$672	\$691	\$717	\$742	\$768	\$794	\$821	\$848	\$875	\$902		
	other utilities	\$164,000		\$1.00	1.60%	0.50%	1.0%	2.0%		\$260	\$171	\$173	\$175	\$177	\$179	\$181	\$183	\$186	\$188	\$190		
	indirect costs									\$5,815	\$171	\$173	\$175	\$177	\$179	\$181	\$183	\$186	\$188	\$190		
										\$129,603	\$4,579	\$4,755	\$4,937	\$5,126	\$5,323	\$5,527	\$5,740	\$5,960	\$6,190	\$6,428		
	planned maintenance	\$742,920	1.5%	\$4.53	3.70%	2.5%	3.8%	5.0%		\$129,603	\$4,579	\$4,755	\$4,937	\$5,126	\$5,323	\$5,527	\$5,740	\$5,960	\$6,190	\$6,428		
	unplanned maintenance	\$990,560	2.0%	\$6.04	4.22%	3.5%	4.2%	5.0%		\$41,426	\$1,461	\$1,616	\$1,574	\$1,633	\$1,694	\$1,758	\$1,824	\$1,893	\$1,964	\$2,038		
	security	\$328,000		\$2.00	2.00%	2.0%	3.0%	4.0%		\$60,603	\$2,180	\$2,272	\$2,368	\$2,468	\$2,573	\$2,682	\$2,795	\$2,914	\$3,037	\$3,166		
	safety / fire protection	\$246,000		\$1.50	2.00%	2.0%	3.0%	4.0%		\$15,757	\$536	\$562	\$589	\$616	\$643	\$671	\$699	\$727	\$755	\$783		
	post-operation / DD&D																					
	demolition	\$14,858,400	30.0%	\$90.60	2.50%	2.5%	3.0%	5.0%		\$11,817	\$402	\$414	\$426	\$439	\$452	\$466	\$480	\$494	\$509	\$525		
		</																				

Alternative 1, DO NOTHING (INTEC LCC Analysis Summary Sheet 2)

								1	2	3	4	5	6	7	8
								2002	2003	2004	2005	2006	2007	2008	2009
								1.024	1.033	1.042	1.132	1.144	1.176	1.209	1.242
								Discounted Annual Cost							
								Discount factor	0.953						
								Annual Costs	\$136,960	\$3,572	\$2,838	\$3,552	\$1,649	\$3,435	\$2,318
								Escalated Annual Cost	\$130,705	\$3,622	\$2,695	\$3,713	\$1,649	\$3,545	\$2,415
								Cumulative Discounted LCC	\$57,711	\$3,439	\$5,871	\$9,051	\$10,382	\$13,045	\$14,748
								cost / sq ft							
								% of acquisition cost							
								\$ / square foot							
								annual increase							
								Min							
								Target							
								Max							
Do Nothing (Feb'01 Staffing Scenario)															
TRA	AREA Sq. Ft	72,800													
	Capital Requests	\$17,548													
	capital acquisition	\$0.00													
	Title I	\$0.00	10.00%		5.8%	10.0%	14.5%								
	Title II	\$0.00	14.00%		12.0%	14.0%	16.0%								
	Title III	\$0.00													
	capital maintenance														
	minor remodel every 5 yr.	\$782,600	3.00%	\$10.75	4.0%	2.5%	5.0%								
	minor remodel every 10 yr.	\$1,099,280	5.00%	\$15.10	4.0%	3.0%	7.0%								
	major remodel every 20 yr.	\$2,198,560	10.00%	\$30.20	4.0%	8.0%	12.0%								
	direct costs (associated with direct operations)														
	heating / cooling	\$70,616		\$0.87	3.00%	2.0%	4.0%								
	lighting	\$48,776		\$0.67	3.00%	2.5%	5.0%								
	electrical loads due to operations not included														
	cleaning	\$218,400		\$3.00	3.00%	2.0%	5.0%								
	other utilities	\$72,800		\$1.00	1.00%	0.50%	2.0%								
	indirect costs														
	planned maintenance	\$328,784	1.5%	\$4.53	3.00%	2.5%	5.0%								
	unplanned maintenance	\$439,712	2.0%	\$6.04	4.00%	3.0%	7.0%								
	security	\$146,800		\$2.00	3.00%	2.0%	4.0%								
	safety / fire protection	\$109,200		\$1.50	3.00%	2.0%	4.0%								
	post-operation / DD&D														
	demolition	\$6,595,680	30.0%	\$90.60	3.00%	2.5%	5.0%								

								9	10	11	12	13	14	15	16
								2010	2011	2012	2013	2014	2015	2016	2017
								1.277	1.313	1.360	1.387	1.420	1.465	1.507	1.550
								Discounted Annual Cost							
								Discount factor	0.003						
								Annual Costs	\$136,960	\$4,444	\$4,820	\$3,107	\$2,182	\$2,280	\$3,567
								Escalated Annual Cost	\$130,705	\$5,131	\$4,620	\$3,456	\$2,182	\$2,260	\$4,138
								Cumulative Discounted LCC	\$57,711	\$2,792	\$2,878	\$1,780	\$1,174	\$1,155	\$1,731
								cost / sq ft							
								% of acquisition cost							
								\$ / square foot							
								annual increase							
								Min							
								Target							
								Max							
Do Nothing (Feb'01 Staffing Scenario)															
TRA	AREA Sq. Ft	72,800													
	Capital Requests	\$17,548													
	capital acquisition	\$0.00													
	Title I	\$0.00	10.00%		5.8%	10.0%	14.5%								
	Title II	\$0.00	14.00%		12.0%	14.0%	16.0%								
	Title III	\$0.00													
	capital maintenance														
	minor remodel every 5 yr.	\$782,600	3.00%	\$10.75	4.0%	2.5%	5.0%								
	minor remodel every 10 yr.	\$1,099,280	5.00%	\$15.10	4.0%	3.0%	7.0%								
	major remodel every 20 yr.	\$2,198,560	10.00%	\$30.20	4.0%	8.0%	12.0%								
	direct costs (associated with direct operations)														
	heating / cooling	\$70,616		\$0.97	3.00%	2.0%	4.0%								
	lighting	\$48,776		\$0.67	3.00%	2.5%	5.0%								
	electrical loads due to operations not included														
	cleaning	\$218,400		\$3.00	3.00%	2.0%	5.0%								
	other utilities	\$72,800		\$1.00	1.00%	0.50%	2.0%								
	indirect costs														
	planned maintenance	\$328,784	1.5%	\$4.53	3.00%	2.5%	5.0%								
	unplanned maintenance	\$439,712	2.0%	\$6.04	4.00%	3.0%	7.0%								
	security	\$146,800		\$2.00	3.00%	2.0%	4.0%								
	safety / fire protection	\$109,200		\$1.50	3.00%	2.0%	4.0%								
	post-operation / DD&D														
	demolition	\$6,595,680	30.0%	\$90.60	3.00%	2.5%	5.0%								

Alternative 1, DO NOTHING (TRA LCC Analysis Summary Sheet 1)

							17	18	19	20	21	22	23	24	
							2016	2019	2020	2021	2022	2023	2024	2025	
							1.562	1.638	1.663	1.736	1.779	1.829	1.880	1.933	
Discounted Annual Cost							\$57,711	\$1,082	\$1,481	\$1,048	\$4,214	\$1,150	\$998	\$982	\$967
Discount factor							0.183	0.4156	0.3967	0.3768	0.3568	0.3381	0.3211	0.3068	0.2935
Annual Costs							\$135,080	\$2,604	\$3,777	\$2,795	\$11,837	\$3,401	\$3,108	\$3,222	\$3,338
Escalated Annual Cost							\$139,785	\$2,604	\$4,456	\$2,795	\$11,837	\$3,108	\$3,108	\$3,222	\$3,338
Cumulative Discounted LCC								\$36,120	\$37,611	\$38,658	\$42,872	\$44,022	\$45,020	\$46,002	\$46,980
cost / sqft															
% of acquisition cost															
\$ / square foot															
annual increase															
Min															
Target															
Max															
Do Nothing (Feb'01 Staffing Scenario)															
TRA	AREA Sq. Ft	72,800													
	Capital Requests	\$17,546					\$17,546	\$0	\$1,050	\$0	\$0	\$400	\$0	\$0	\$0
	capital acquisition	\$0.00					\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title I	\$0.00	10.100%		5.8%	10.0%	14.5%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title II	\$0.00	14.800%		12.0%	14.0%	16.0%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title III	\$0.00						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	capital maintenance						\$22,278	\$0	\$0	\$0	\$8,941	\$0	\$0	\$0	\$0
	minor remodel every 5 yr.	\$782,860	3.500%	\$10.75	4.0%	2.5%	3.0%	\$8,859	\$0	\$0	\$0	\$1,715	\$0	\$0	\$0
	minor remodel every 10 yr.	\$1,059,260	0.000%	\$15.10	4.0%	3.0%	5.0%	\$7,091	\$0	\$0	\$0	\$2,409	\$0	\$0	\$0
	major remodel every 20 yr.	\$2,158,560	10.000%	\$30.20	4.0%	8.0%	10.0%	\$4,817	\$0	\$0	\$0	\$4,817	\$0	\$0	\$0
	direct costs (associated with direct operations)						\$24,328	\$674	\$695	\$716	\$737	\$760	\$783	\$806	\$831
	heating / cooling	\$70,616		\$0.97	2.00%	2.0%	3.0%	\$4,199	\$117	\$120	\$124	\$128	\$131	\$135	\$139
	lighting	\$48,776		\$0.67	2.00%	2.5%	3.0%	\$3,293	\$88	\$91	\$94	\$97	\$100	\$104	\$108
	electrical loads due to operations not included														
	cleaning	\$218,400		\$3.00	2.00%	2.0%	3.0%	\$13,873	\$381	\$394	\$407	\$421	\$435	\$449	\$464
	other utilities	\$72,800		\$1.00	1.00%	0.50%	1.0%	\$3,052	\$89	\$90	\$91	\$92	\$93	\$94	\$95
	indirect costs						\$71,599	\$1,529	\$2,003	\$2,079	\$2,159	\$2,241	\$2,327	\$2,416	\$2,508
	planned maintenance	\$329,784	1.5%	\$4.53	2.70%	2.5%	3.0%	\$22,852	\$618	\$642	\$668	\$691	\$717	\$744	\$772
	unplanned maintenance	\$439,712	2.0%	\$6.04	4.20%	3.5%	4.2%	\$33,595	\$890	\$927	\$967	\$1,008	\$1,050	\$1,095	\$1,141
	security	\$148,800		\$2.00	2.00%	2.0%	3.0%	\$8,858	\$241	\$248	\$255	\$263	\$271	\$279	\$286
	safety / fire protection	\$109,200		\$1.50	2.00%	2.0%	3.0%	\$6,483	\$180	\$186	\$191	\$197	\$203	\$209	\$216
	post-operation / DD&D														
	demolition	\$6,595,888	30.0%	\$90.88	2.50%	2.5%	3.0%	\$11,837	\$12,251	\$12,580	\$12,124	\$13,583	\$14,059	\$14,551	\$15,000

							25	26	27	28	29	30	31	32	33	34
							2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
							1.957	2.042	2.100	2.166	2.219	2.261	2.345	2.410	2.478	2.547
Discounted Annual Cost							\$57,711	\$1,525	\$937	\$922	\$907	\$893	\$2,176	\$885	\$852	\$839
Discount factor							0.053	0.2750	0.2611	0.2490	0.2395	0.2327	0.2124	0.2017	0.1916	0.1819
Annual Costs							\$135,080	\$5,547	\$3,586	\$3,717	\$3,853	\$3,993	\$10,243	\$4,291	\$4,448	\$4,611
Escalated Annual Cost							\$139,785	\$5,547	\$3,586	\$3,717	\$3,853	\$3,993	\$10,243	\$4,291	\$4,448	\$4,611
Cumulative Discounted LCC							\$48,494	\$49,431	\$50,353	\$51,260	\$52,153	\$53,029	\$53,894	\$54,746	\$55,585	\$56,411
cost / sqft																
% of acquisition cost																
\$ / square foot																
annual increase																
Min																
Target																
Max																
Do Nothing (Feb'01 Staffing Scenario)																
TRA	AREA Sq. Ft	72,800														
Capital Requests		\$17,546					\$17,546	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
capital acquisition		\$0.00					\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Title I		\$0.00	10.100%		5.8%	10.0%	14.5%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Title II		\$0.00	14.800%		12.0%	14.0%	16.0%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Title III		\$0.00						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
capital maintenance							\$22,278	\$2,088	\$0	\$0	\$0	\$0	\$8,104	\$0	\$0	\$0
minor remodel every 5 yr.		\$782,860	3.500%	\$10.75	4.0%	2.5%	3.0%	\$8,859	\$2,088	\$0	\$0	\$0	\$2,538	\$0	\$0	\$0
minor remodel every 10 yr.		\$1,059,250	0.000%	\$15.10	4.0%	3.0%	5.0%	\$7,091	\$0	\$0	\$0	\$0	\$3,566	\$0	\$0	\$0
major remodel every 20 yr.		\$2,158,560	10.000%	\$30.20	4.0%	8.0%	10.0%	\$4,817	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
direct costs (associated with direct operations)							\$24,328	\$866	\$882	\$909	\$937	\$966	\$995	\$1,026	\$1,058	\$1,090
heating / cooling		\$70,616		\$0.97	2.00%	2.0%	3.0%	\$4,199	\$148	\$152	\$157	\$162	\$166	\$171	\$177	\$182
lighting		\$48,776		\$0.67	2.00%	2.5%	3.0%	\$3,293	\$115	\$119	\$123	\$128	\$132	\$137	\$142	\$147
electrical loads due to operations not included																
cleaning		\$218,400		\$3.00	2.00%	2.0%	3.0%	\$13,873	\$466	\$512	\$569	\$597	\$655	\$694	\$724	\$764
other utilities		\$72,800		\$1.00	1.00%	0.50%	1.0%	\$3,052	\$97	\$98	\$100	\$101	\$102	\$103	\$104	\$106
indirect costs							\$71,599	\$2,604	\$2,704	\$2,808	\$2,916	\$3,027	\$3,144	\$3,265	\$3,390	\$3,520
planned maintenance		\$329,784	1.5%	\$4.53	2.70%	2.5%	3.0%	\$22,852	\$631	\$662	\$695	\$729	\$764	\$1,000	\$1,038	\$1,077
unplanned maintenance		\$439,712	2.0%	\$6.04	4.20%	3.5%	4.2%	\$33,595	\$1,240	\$1,292	\$1,347	\$1,404	\$1,463	\$1,525	\$1,590	\$1,657
security		\$148,800		\$2.00	2.00%	2.0%	3.0%	\$8,858	\$305	\$314	\$323	\$333	\$343	\$353	\$364	\$375
safety / fire protection		\$109,200		\$1.50	2.00%	2.0%	3.0%	\$6,483	\$229	\$235	\$243	\$250	\$257	\$266	\$273	\$281
post-operation / DD&D																
demolition		\$6,595,888	30.0%	\$90.88	2.50%	2.5%	3.0%	\$16,587	\$16,133	\$16,867	\$17,282	\$17,887	\$18,513	\$19,161	\$19,831	\$20,525

Alternative 1, DO NOTHING (TRA LCC Analysis Summary Sheet 2)

						1	2	3	4	5	6	7	8	
						2002	2003	2004	2005	2006	2007	2008	2009	
						1.028	1.053	1.082	1.112	1.144	1.176	1.209	1.242	
Discounted Annual Cost						\$120,478	\$6,970	\$6,840	\$8,950	\$9,328	\$19,754	\$19,207	\$1,582	\$1,550
Discount factor						0.983	0.980	0.9019	0.8505	0.8134	0.7724	0.7324	0.6906	0.6616
Annual Costs						\$233,878	\$7,340	\$7,584	\$10,253	\$11,131	\$23,420	\$23,549	\$2,271	\$2,343
Escalated Annual Cost						\$270,521	\$7,340	\$7,584	\$10,450	\$11,466	\$25,674	\$26,183	\$2,271	\$2,343
Cumulative Discounted LCC							\$6,970	\$13,811	\$22,761	\$32,089	\$51,843	\$71,049	\$72,631	\$74,181
						cost / sqft	% of acquisition cost	\$ / square foot	annual increase	Min	Target	Max		
AREA Sq. Ft						150,000								
Capital Requests						\$64,938								
capital acquisition						\$35,400,000	\$236.00							
Title I						\$16.00	8.00%		4.0%	8.0%	12.0%			
Title II						\$20.00	10.00%		6.0%	10.0%	14.0%			
Construction						\$200.00								
capital maintenance														
minor remodel every 5 yr.						\$1,230,000	3.00%		4.0%	2.5%	3.0%	5.0%		
minor remodel every 10 yr.						\$1,770,000	5.00%		4.0%	3.0%	5.0%	7.0%		
major remodel every 20 yr.						\$3,540,000	10.00%		4.0%	8.0%	10.0%	12.0%		
direct costs (associated with direct operations)														
heating / cooling						\$145,500		\$0.97	3.00%	2.0%	3.0%	4.0%		
lighting						\$100,500		\$0.67	3.50%	2.5%	3.0%	5.0%		
electrical loads due to operations not included														
cleaning						\$225,000		\$1.50	3.33%	2.0%	3.0%	5.0%		
other utilities						\$150,000		\$1.00	1.67%	0.50%	1.0%	2.0%		
indirect costs														
planned maintenance						\$531,000	1.5%	\$3.54	3.76%	2.5%	3.8%	5.0%		
unplanned maintenance						\$265,500	0.8%	\$1.77	4.23%	3.5%	4.2%	5.0%		
security						\$450,000		\$3.00	3.00%	2.0%	3.0%	4.0%		
safety / fire protection						\$225,000		\$1.50	3.00%	2.0%	3.0%	4.0%		
post-operation / DD&D demolition						\$2,812,000	8.0%	\$18.88	8.50%	2.5%	3.0%	5.0%		

LICP SERF @ INTEC(Feb '01 Staffing Scenario)

AREA Sq. Ft	150,000													
Capital Requests	\$64,938													
capital acquisition	\$35,400,000	\$236.00												
Title I		\$16.00	8.00%		4.0%	8.0%	12.0%							
Title II		\$20.00	10.00%		6.0%	10.0%	14.0%							
Construction	\$200.00													
capital maintenance														
minor remodel every 5 yr.	\$1,230,000		3.00%		4.0%	2.5%	3.0%	5.0%						
minor remodel every 10 yr.	\$1,770,000		5.00%		4.0%	3.0%	5.0%	7.0%						
major remodel every 20 yr.	\$3,540,000		10.00%		4.0%	8.0%	10.0%	12.0%						
direct costs (associated with direct operations)														
heating / cooling	\$145,500			\$0.97	3.00%	2.0%	3.0%	4.0%						
lighting	\$100,500			\$0.67	3.50%	2.5%	3.0%	5.0%						
electrical loads due to operations not included														
cleaning	\$225,000			\$1.50	3.33%	2.0%	3.0%	5.0%						
other utilities	\$150,000			\$1.00	1.67%	0.50%	1.0%	2.0%						
indirect costs														
planned maintenance	\$531,000		1.5%	\$3.54	3.76%	2.5%	3.8%	5.0%						
unplanned maintenance	\$265,500		0.8%	\$1.77	4.23%	3.5%	4.2%	5.0%						
security	\$450,000			\$3.00	3.00%	2.0%	3.0%	4.0%						
safety / fire protection	\$225,000			\$1.50	3.00%	2.0%	3.0%	4.0%						
post-operation / DD&D demolition	\$2,812,000		8.0%	\$18.88	8.50%	2.5%	3.0%	5.0%						

						9	10	11	12	13	14	15	16	
						2010	2011	2012	2013	2014	2015	2016	2017	
						1.277	1.313	1.350	1.387	1.426	1.466	1.507	1.550	
Discounted Annual Cost						\$120,478	\$1,518	\$1,486	\$2,582	\$1,664	\$1,633	\$1,602	\$1,573	\$4,109
Discount factor						0.983	0.980	0.966	0.953	0.941	0.929	0.917	0.907	
Annual Costs						\$233,878	\$2,417	\$2,494	\$4,557	\$3,092	\$3,195	\$3,302	\$3,412	\$8,388
Escalated Annual Cost						\$270,521	\$2,417	\$2,494	\$5,250	\$3,092	\$3,195	\$3,302	\$3,412	\$12,609
Cumulative Discounted LCC							\$75,699	\$77,187	\$79,769	\$81,433	\$83,065	\$84,668	\$86,240	\$90,349
						cost / sqft	% of acquisition cost	\$ / square foot	annual increase	Min	Target	Max		
AREA Sq. Ft						150,000								
Capital Requests						\$64,938								
capital acquisition						\$35,400,000	\$236.00							
Title I						\$16.00	8.00%		4.0%	8.0%	12.0%			
Title II						\$20.00	10.00%		6.0%	10.0%	14.0%			
Construction						\$200.00								
capital maintenance														
minor remodel every 5 yr.						\$1,230,000	3.00%		4.0%	2.5%	3.0%	5.0%		
minor remodel every 10 yr.						\$1,770,000	5.00%		4.0%	3.0%	5.0%	7.0%		
major remodel every 20 yr.						\$3,540,000	10.00%		4.0%	8.0%	10.0%	12.0%		
direct costs (associated with direct operations)														
heating / cooling						\$145,500		\$0.97	3.00%	2.0%	3.0%	4.0%		
lighting						\$100,500		\$0.67	3.00%	2.5%	3.0%	5.0%		
electrical loads due to operations not included														
cleaning						\$225,000		\$1.50	3.33%	2.0%	3.0%	5.0%		
other utilities						\$150,000		\$1.00	1.67%	0.50%	1.0%	2.0%		
indirect costs														
planned maintenance						\$531,000	1.5%	\$3.54	3.76%	2.5%	3.8%	5.0%		
unplanned maintenance						\$265,500	0.8%	\$1.77	4.23%	3.5%	4.2%	5.0%		
security						\$450,000		\$3.00	3.00%	2.0%	3.0%	4.0%		
safety / fire protection						\$225,000		\$1.50	3.00%	2.0%	3.0%	4.0%		
post-operation / DD&D														
demolition						\$2,812,000	8.0%	\$18.88	8.50%	2.5%	3.0%	5.0%		

Alternative 2, INTEC SERF (LCC Analysis Summary Sheet 1)

										17	18	19	20	21	22	23	24			
										2016	2018	2020	2021	2022	2023	2024	2025			
										1,592	1,638	1,683	1,730	1,779	1,829	1,880	1,933			
Discounted Annual Cost										\$120,476	\$1,515	\$1,487	\$1,460	\$1,433	\$2,399	\$1,381	\$1,356	\$1,331		
Discount factor										0.053	6.4156	6.3647	6.3149	6.2660	6.2181	6.1711	6.1250			
Annual Costs										\$233,878	\$3,645	\$3,767	\$3,894	\$4,025	\$7,097	\$4,302	\$4,447	\$4,598		
Escalated Annual Cost										\$270,521	\$3,645	\$3,767	\$3,894	\$4,025	\$9,385	\$4,302	\$4,447	\$4,598		
Cumulative Discounted LCC											\$91,864	\$93,351	\$94,811	\$96,244	\$98,643	\$100,024	\$101,380	\$102,711		
LCC SERF @ INTEC(Feb '01 Staffing Scenario)										cost / sqft	% of acquisition cost	\$ / square foot	annual increase	Min	Target	Max				
AREA Sq. Ft										150,000										
Capital Requests										\$64,938										
capital acquisition										\$35,400,000	\$236.00									
Title I										\$16.00	6.900%		4.0%	8.0%	12.0%	\$2,400	\$0	\$0	\$0	
Title II										\$20.00	10.000%		6.0%	10.0%	14.0%	\$3,600	\$0	\$0	\$0	
Construction										\$200.00						\$38,800	\$0	\$0	\$0	
capital maintenance																\$53,618	\$0	\$0	\$0	
minor remodel every 5 yr.										\$1,239,000	3.500%	4.0%	2.5%	3.0%	6.0%	\$15,252	\$0	\$0	\$0	
minor remodel every 10 yr.										\$1,770,000	5.000%	4.0%	3.0%	5.0%	7.0%	\$8,591	\$0	\$0	\$0	
major remodel every 20 yr.										\$3,540,000	10.000%	4.0%	8.0%	10.0%	12.0%	\$9,815	\$0	\$0	\$0	
direct costs (associated with direct operations)																\$45,839	\$996	\$1,025	\$1,055	
heating / cooling										\$145,500		\$0.97	3.000%	2.0%	3.0%	4.0%	\$9,895	\$240	\$248	\$255
lighting										\$100,500		\$0.67	3.500%	2.5%	3.0%	5.0%	\$7,544	\$180	\$187	\$193
electrical loads due to operations not included																\$200	\$207	\$214	\$222	
cleaning										\$225,000		\$1.50	3.000%	2.0%	3.0%	5.0%	\$26,012	\$393	\$405	\$420
other utilities										\$150,000		\$1.00	1.00%	1.0%	2.0%	\$7,588	\$783	\$785	\$787	
indirect costs																\$119,721	\$2,649	\$2,742	\$2,839	
planned maintenance										\$531,000	1.5%	\$3.54	3.767%	2.5%	3.8%	5.0%	\$44,253	\$996	\$1,033	\$1,072
unplanned maintenance										\$265,500	0.8%	\$1.77	4.233%	3.5%	4.2%	5.0%	\$21,483	\$537	\$560	\$584
security										\$450,000		\$3.00	3.000%	2.0%	3.0%	4.0%	\$28,538	\$744	\$766	\$789
safety / fire protection										\$225,000		\$1.50	3.000%	2.0%	3.0%	4.0%	\$15,456	\$372	\$383	\$395
post-operation / DD&D																\$400	\$419	\$431	\$444	
demolition										\$2,832,000	8.0%	\$18.88	3.500%	2.5%	3.0%	6.0%	\$5,083	\$5,260	\$5,445	\$5,635

										25	26	27	28	29	30	31	32	33	34	35														
										2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036														
										1,987	2,042	2,100	2,158	2,219	2,281	2,345	2,410	2,478	2,547	2,619														
Discounted Annual Cost										\$120,476	\$1,307	\$6,112	\$1,260	\$1,238	\$1,215	\$1,193	\$2,049	\$1,151	\$1,131	\$1,110	\$0													
Discount factor										0.053	0.2750	0.2611	0.2480	0.2355	0.2237	0.2124	0.2017	0.1916	0.1819	0.1728	0.1641													
Annual Costs										\$233,878	\$4,753	\$23,405	\$5,082	\$5,255	\$5,434	\$5,619	\$10,157	\$6,009	\$6,215	\$6,428	\$0													
Escalated Annual Cost										\$270,521	\$4,753	\$42,679	\$5,082	\$5,255	\$5,434	\$5,619	\$16,002	\$6,009	\$6,215	\$6,428	\$0													
Cumulative Discounted LCC										\$104,019	\$110,131	\$111,391	\$112,628	\$113,843	\$115,037	\$117,086	\$118,237	\$119,367	\$120,478	\$120,478														
LCC SERF @ INTEC(Feb '01 Staffing Scenario)										cost / sqft	% of acquisition cost	\$ / square foot	annual increase	Min	Target	Max																		
AREA Sq. Ft										150,000																								
Capital Requests										\$64,938											\$105,661	\$0	\$37,764	\$0	\$0	\$0	\$0	\$10,191	\$0	\$0	\$0			
capital acquisition										\$35,400,000	\$236.00											\$2,400	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Title I										\$16.00	8.000%											\$3,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Title II										\$20.00	10.000%											\$30,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Construction										\$200.00											\$33,816	\$0	\$18,491	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
capital maintenance																						\$15,252	\$0	\$3,572	\$0	\$0	\$0	\$0	\$4,346	\$0	\$0	\$0	\$0	
minor remodel every 5 yr.										\$1,239,000	3.500%											\$8,551	\$0	\$5,104	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
minor remodel every 10 yr.										\$1,770,000	5.000%											\$9,815	\$0	\$9,815	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
major remodel every 20 yr.										\$3,540,000	10.000%											\$45,139	\$1,253	\$1,290	\$1,328	\$1,367	\$1,408	\$1,449	\$1,492	\$1,537	\$1,583	\$1,630		
direct costs (associated with direct operations)																						\$8,995	\$305	\$314	\$323	\$333	\$343	\$353	\$364	\$375	\$386	\$397		
heating / cooling										\$145,500		\$0.97	3.000%	2.0%	3.0%	4.0%				\$7,544	\$238	\$246	\$254	\$263	\$273	\$282	\$292	\$302	\$313	\$324				
lighting										\$100,500		\$0.67	3.500%	2.5%	3.0%	5.0%																		
electrical loads due to operations not included																																		
cleaning										\$225,000		\$1.50	3.333%	2.0%	3.0%	5.0%				\$20,912	\$511	\$528	\$545	\$564	\$582	\$602	\$622	\$643	\$664	\$686				
other utilities										\$150,000		\$1.00	1.167%	0.50%	1.0%	2.0%				\$7,580	\$200	\$203	\$205	\$208	\$210	\$212	\$215	\$217	\$220	\$223				
indirect costs																						\$119,721	\$3,500	\$3,625	\$3,754	\$3,887	\$4,026	\$4,169	\$4,318	\$4,472	\$4,632	\$4,798		
planned maintenance										\$531,000	1.5%	\$3.54	3.767%	2.5%	3.8%	5.0%				\$44,253	\$1,338	\$1,389	\$1,441	\$1,495	\$1,552	\$1,610	\$1,671	\$1,734	\$1,799	\$1,867				
unplanned maintenance										\$265,500	0.8%	\$1.77	4.233%	3.5%	4.2%	5.0%				\$31,483	\$749	\$780	\$813	\$848	\$891	\$921	\$960	\$1,001	\$1,043	\$1,087				
security										\$450,000		\$3.00	3.000%	2.0%	3.0%	4.0%				\$28,528	\$942	\$970	\$1,000	\$1,030	\$1,060	\$1,092	\$1,125	\$1,159	\$1,194	\$1,229				
safety / fire protection										\$225,000		\$1.50	3.000%	2.0%	3.0%	4.0%				\$15,456	\$471	\$485	\$500	\$515	\$530	\$546	\$563	\$579	\$597	\$615				
post-operation / DD&D																																		
demolition										\$2,832,000	8.0%	\$18.88	3.500%	2.5%	3.0%	5.0%				\$6,693	\$6,927	\$7,169	\$7,420	\$7,680	\$7,949	\$8,227	\$8,515	\$8,813	\$9,121					

Alternative 2, INTEC SERF (LCC Analysis Summary Sheet 2)

										1	2	3	4	5	6	7	8					
										2002	2003	2004	2005	2006	2007	2008	2009					
										1.024	1.053	1.082	1.112	1.144	1.176	1.209	1.242					
Discounted Annual Cost										\$148,069	\$8,979	\$8,764	\$11,441	\$9,863	\$22,103	\$21,201	\$1,636	\$1,603				
Discount factor 0.959										0.950	0.9019	0.8505	0.8136	0.7724	0.7338	0.6980	0.6659					
Annual Costs										\$313,962	\$7,340	\$7,500	\$12,934	\$11,432	\$25,868	\$25,700	\$2,348	\$2,423				
Escalated Annual Cost										\$418,144	\$7,340	\$7,500	\$13,358	\$11,880	\$28,616	\$28,903	\$2,348	\$2,423				
Cumulative Discounted LCC										\$8,979	\$13,734	\$25,176	\$34,839	\$56,942	\$78,144	\$79,780	\$81,382					
										cost / sqft	% of acquisition cost	\$ / square foot	annual increase	Min	Target	Max						
LICP SERF @ INTEC & TRA (Feb '01 Staffing Scenario)																						
702 occupants 221 BFT/occupant																						
AREA Sq. Ft 155,142																						
Capital Requests \$67,164																						
capital acquisition \$56,813,512 \$235.00																						
Title I \$16.00 0.000%										4.6%	8.0%	12.8%										
Title II \$20.00 10.000%										8.6%	10.0%	14.8%										
Construction \$200.00																						
capital maintenance \$34,721																						
minor remodel every 5 yr. \$1,281,473 3.000%										4.0%	2.5%	3.0%	5.6%									
minor remodel every 10 yr. \$1,320,878 5.000%										4.0%	3.0%	5.0%	7.6%									
major remodel every 20 yr. \$9,861,361 10.000%										4.0%	8.0%	10.0%	12.8%									
direct costs (associated with direct operations) \$45,828										\$2,007.8	\$2,120.6	\$2,182.6	\$2,248.6	\$2,312.6	\$2,060.1	\$778.3	\$802.2					
heating / cooling \$160,488 \$0.97 3.000%										2.0%	3.0%	4.6%	\$387.6	\$399.2	\$358.8	\$185.1	\$190.6					
lighting \$103,846 \$0.67 3.000%										2.0%	3.0%	5.6%	\$263.7	\$272.9	\$282.5	\$132.2	\$136.9					
electrical loads (due to operations not included)																						
cleaning \$252,713 \$1.50 3.333%										2.0%	3.0%	5.6%	\$1,176.1	\$1,214.3	\$1,254.7	\$1,122.0	\$282.6	\$302.6				
other utilities \$166,142 \$1.00 1.667%										1.0%	2.0%		\$367.8	\$371.9	\$376.2	\$326.3	\$168.3	\$170.2				
indirect costs \$121,589										\$5,252.1	\$5,379.3	\$5,582.7	\$5,793.9	\$6,013.3	\$5,400.7	\$1,370.1	\$1,622.6					
planned maintenance \$549,308 1.5%										\$3.54	\$3.76%	2.5%	3.8%	5.0%	\$1,864.5	\$1,934.7	\$1,737.3	\$711.4	\$738.2			
unplanned maintenance \$274,601 0.8%										\$1.77	4.733%	3.5%	4.2%	5.0%	\$2,031.0	\$2,038.1	\$2,379.0	\$0.0	\$0.0			
security \$464,426 \$3.00 2.000%										2.0%	3.0%	4.0%	\$776.1	\$823.1	\$733.8	\$572.4	\$588.6					
safety / fire protection \$252,713 \$1.50 3.000%										2.0%	3.0%	4.0%	\$555.7	\$604.9	\$601.9	\$689.3	\$617.3	\$550.2	\$288.2	\$294.6		
post-operation / DD&D																						
remission \$2,928,081 8.0%										\$18.89	3.500%	2.5%	3.0%	5.0%	\$67,458.9	\$68,907.6	\$71,319.4	\$73,818.9	\$76,399.1	\$89,426.1	\$2,726.6	\$3,857.1

LICP SERF @ INTEC & TRA (Feb '01 Staffing Scenario)										2010										2011										2012										2013										2014										2015										2016										2017																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
AREA Sq. Ft.										702 occupants										221 6ft ² /occupant										155,142																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							

Alternative 3, INTEC & TRA SERF (LCC Analysis Summary Sheet 1)

[illegible]

										1	2	3	4	5	6	7	8
										2002	2003	2004	2005	2006	2007	2008	2009
										1.024	1.053	1.082	1.112	1.144	1.176	1.209	1.242
										Discounted Annual Cost							
										Discount							
										factor	0.958	0.909	0.858	0.8134	0.7724	0.7338	0.6966
										Annual Costs	\$7,340	\$7,584	\$7,853	\$8,131	\$9,345	\$9,474	\$7,927
										Escalated Annual Cost	\$7,340	\$7,584	\$7,853	\$8,131	\$9,478	\$9,637	\$7,135
										Cumulative Discounted LCC	\$6,970	\$13,811	\$20,536	\$27,150	\$34,471	\$41,540	\$47,984
										cost / sq ft							
										% of acquisition cost							
										\$ / square foot							
										annual increase	Min	Target	Max				
										Lease SERF @ INTEC (Feb'01 Staffing Scenario)							
										AREA Sq. Ft	150,000						
										Capital Requests	\$178,271						
										capital acquisition	\$1,851,809	\$12.34					
										Title I	\$0.00	0.000%	4.0%	8.0%	12.0%		
										Title II	\$0.00	0.000%	2.8%	6.0%	10.0%	14.0%	
										Lease	\$12.34						
										capital maintenance							
										minor remodel every 5 yr.		3.000%	4.0%	2.5%	3.0%	5.0%	
										minor remodel every 10 yr.		5.000%	4.0%	3.0%	5.0%	7.0%	
										major remodel every 20 yr.		10.000%	4.0%	6.0%	10.0%	12.0%	
										direct costs (associated with direct operations)							
										heating / cooling	\$145,500	\$0.97	2.000%	2.0%	3.0%	4.0%	
										lighting	\$100,500	\$0.67	2.500%	2.5%	3.0%	5.0%	
										electrical loads due to operations not included							
										cleaning	\$225,000	\$1.50	3.333%	2.0%	3.0%	5.0%	
										other utilities	\$150,000	\$1.00	1.667%	0.50%	1.0%	2.0%	
										indirect costs							
										planned maintenance	\$41,060	1.5%	\$0.27	2.707%	2.5%	3.8%	5.0%
										Taxes		0.8%	\$0.00	4.222%	3.5%	4.2%	5.0%
										security	\$450,000		\$3.00	2.000%	2.0%	3.0%	4.0%
										safety / fire protection	\$225,000		\$1.50	2.000%	2.0%	3.0%	4.0%
										post-operation / DD&D							
										demolition	\$2,832,000	8.0%	\$18.88	3.500%	2.5%	3.0%	5.0%

Alternative 4, LEASED SERF (LCC Analysis Summary Sheet 1)

										17	18	19	20	21	22	23	24		
										2018	2019	2020	2021	2022	2023	2024	2025		
										1.593	1.638	1.683	1.730	1.779	1.829	1.880	1.933		
										Discounted Annual Cost	\$111,287	\$2,623	\$2,549	\$2,477	\$2,407	\$1,643	\$1,584	\$1,547	\$1,502
										Discount factor	0.659	0.4156	0.2647	0.1749	0.1360	0.1181	0.1041	0.0940	0.0865
										Annual Costs	\$221,487	\$6,311	\$6,457	\$6,608	\$6,762	\$4,859	\$4,965	\$5,075	\$5,187
										Escalated Annual Cost	\$295,663	\$8,800	\$9,187	\$9,593	\$10,019	\$6,796	\$7,056	\$7,327	\$7,610
Cumulative Discounted LCC												\$84,724	\$87,273	\$89,749	\$92,157	\$93,799	\$95,394	\$96,941	\$98,443
Lease SERF @ INTEC (Feb'01 Staffing Scenario)										cost / sqft	% of acquisition cost	\$ / square foot	annual increase	Min	Target	Max			
AREA Sq. Ft	150,000																		
Capital Requests	\$178,271																		
capital acquisition	\$1,851,000	\$12.34																	
Title I	\$0.00	0.000%																	
Title II	\$0.00	0.000%																	
Lease	\$12.34																		
capital maintenance																			
minor remodel every 5 yr.		3.000%																	
minor remodel every 10 yr.		6.000%																	
major remodel every 20 yr.		10.000%																	
direct costs (associated with direct operations)																			
heating / cooling	\$145,500																		
lighting	\$100,500																		
electrical loads due to operations not included																			
cleaning	\$225,000																		
other utilities	\$150,000																		
indirect costs																			
planned maintenance	\$41,060	1.5%																	
Taxes		0.8%																	
security	\$450,000																		
safety / fire protection	\$225,000																		
post-operation / DD&D																			
demolition	\$2,832,000	8.0%																	

										25	26	27	28	29	30	31	32	33	34	35		
										2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036		
										1.987	2.042	2.100	2.158	2.219	2.281	2.345	2.410	2.478	2.547	2.619		
										Discounted Annual Cost												
										Discount												
										factor 0.653												
										Annual Costs												
										Escalated Annual Cost												
Cumulative Discounted LCC																						
Lease SERF @ INTEC (Feb'01 Staffing Scenario)										cost / sqft	% of acquisition cost	\$ / square foot	annual increase	Min	Target	Max						
AREA Sq. Ft										150,000												
Capital Requests										\$178,271												
capital acquisition										\$1,851,000	\$12.34											
Title I										\$0.00	0.000%			4.0%	8.0%	12.0%						
Title II										\$0.00	0.000%			2.8%	6.0%	10.0%	14.0%					
Lease										\$12.34												
capital maintenance																						
minor remodel every 5 yr.											3.500%			4.0%	2.5%	3.0%	5.0%					
minor remodel every 10 yr.											6.000%			4.0%	3.0%	5.0%	7.0%					
major remodel every 20 yr.											10.000%			4.0%	8.0%	10.0%	12.0%					
direct costs (associated with direct operations)																						
heating / cooling										\$145,500		\$0.97	3.000%	2.0%	3.0%	4.0%						
lighting										\$100,500		\$0.67	3.500%	2.5%	3.0%	5.0%						
electrical loads due to operations not included																						
cleaning										\$225,000		\$1.50	3.333%	2.0%	3.0%	5.0%						
other utilities										\$150,000		\$1.00	1.667%	0.50%	1.0%	2.0%						
Indirect costs																						
planned maintenance										\$41,060	1.5%	\$0.27	3.767%	2.5%	3.8%	5.0%						
Taxes										\$0.00	0.8%	\$0.00	4.233%	3.5%	4.2%	5.0%						
security										\$450,000		\$3.00	3.000%	2.0%	3.0%	4.0%						
safety / fire protection										\$225,000		\$1.50	3.000%	2.0%	3.0%	4.0%						
post-operation / DD&D																						
demolition										\$2,832,000	8.0%	\$18.88	3.500%	2.5%	3.0%	5.0%						

Alternative 4, LEASED SERF (LCC Analysis Summary Sheet 2)

								1	2	3	4	5	6	7	8
								2002	2003	2004	2005	2006	2007	2008	2009
								1.024	1.052	1.082	1.112	1.144	1.176	1.209	1.242
								Discounted Annual Cost							
								Discount factor							
								Annual Costs							
								Escalated Annual Cost							
								\$52,916	\$6,900	\$2,143	\$1,351	\$1,328	\$2,249	\$1,284	\$1,333
								\$127,184	\$7,131	\$2,333	\$1,577	\$1,633	\$2,911	\$1,751	\$1,913
								\$129,807	\$7,296	\$2,376	\$1,577	\$1,633	\$2,944	\$1,751	\$1,934
								Cumulative Discounted LCC							
								cost / sqft	% of acquisition cost	\$ / square foot	annual increase	Min	Target	Max	
Do Nothing (1200 Employee Reduction Scenario)															
CFA	AREA Sq. Ft	72,800													
	Capital Requests	\$10,185						\$10,185	\$5,645	\$810	\$0	\$0	\$230	\$0	\$100
	capital acquisition	\$0.00						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title I	\$0.00	75.19%		5.8%	10.0%	14.5%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title II	\$0.00	14.00%		12.0%	14.0%	16.0%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title III	\$0.00						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	capital maintenance							\$23,232	\$0	\$0	\$0	\$0	\$990	\$0	\$0
	minor remodel every 5 yr.	\$782,600	1.50%	\$10.75	4.0%	2.5%	3.0%	\$10,814	\$0	\$0	\$0	\$0	\$990	\$0	\$0
	minor remodel every 10 yr.	\$1,099,280	1.00%	\$15.10	4.0%	3.0%	5.0%	\$7,681	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	major remodel every 20 yr.	\$2,190,560	11.00%	\$30.20	4.0%	8.0%	12.0%	\$4,837	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	direct costs (associated with direct operations)							\$23,826	\$423	\$431	\$443	\$456	\$470	\$484	\$512
	heating / cooling	\$70,616		\$0.97	3.00%	2.0%	3.0%	\$4,113	\$73	\$74	\$76	\$79	\$81	\$84	\$89
	lighting	\$48,776		\$0.67	3.00%	2.5%	3.0%	\$3,135	\$50	\$52	\$54	\$55	\$57	\$59	\$61
	electrical loads due to operations not included														
	cleaning	\$218,400		\$3.00	3.33%	2.0%	3.0%	\$13,583	\$226	\$231	\$239	\$247	\$255	\$263	\$272
	other utilities	\$72,800		\$1.00	1.67%	0.50%	1.0%	\$2,993	\$74	\$74	\$75	\$76	\$76	\$77	\$79
	indirect costs							\$69,947	\$1,063	\$1,093	\$1,134	\$1,177	\$1,221	\$1,269	\$1,315
	planned maintenance	\$329,784	1.5%	\$4.53	2.75%	2.5%	3.8%	\$22,355	\$342	\$352	\$365	\$379	\$393	\$409	\$430
	unplanned maintenance	\$439,712	2.0%	\$6.04	4.23%	3.5%	4.2%	\$32,752	\$458	\$473	\$493	\$514	\$536	\$558	\$582
	security	\$145,600		\$2.00	2.00%	2.0%	3.0%	\$8,680	\$150	\$153	\$158	\$162	\$167	\$172	\$177
	safety / fire protection	\$109,200		\$1.50	2.00%	2.0%	3.0%	\$6,380	\$112	\$115	\$118	\$122	\$125	\$129	\$133
	post-operation / DD&D														
	demolition	\$6,595,680	30.0%	\$90.60	1.50%	2.5%	3.0%		\$6,827	\$6,998	\$7,242	\$7,496	\$7,758	\$8,030	\$8,311
								9	10	11	12	13	14	15	16
								2010	2011	2012	2013	2014	2015	2016	2017
								1.277	1.313	1.350	1.387	1.426	1.466	1.507	1.550
								Discounted Annual Cost							
								Discount factor							
								Annual Costs							
								Escalated Annual Cost							
								\$52,850	\$1,379	\$2,992	\$1,182	\$1,163	\$1,308	\$1,198	\$1,976
								\$127,091	\$2,195	\$5,015	\$2,866	\$2,161	\$2,559	\$2,469	\$4,288
								\$129,807	\$2,264	\$5,052	\$2,896	\$2,161	\$2,606	\$2,539	\$4,440
								Cumulative Discounted LCC							
								cost / sqft	% of acquisition cost	\$ / square foot	annual increase	Min	Target	Max	
Do Nothing (1200 Employee Reduction Scenario)															
CFA	AREA Sq. Ft	72,800													
	Capital Requests	\$10,185						\$10,185	\$250	\$120	\$0	\$0	\$320	\$150	\$300
	capital acquisition	\$0.00						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title I	\$0.00	11.00%		5.8%	10.0%	14.5%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title II	\$0.00	14.00%		12.0%	14.0%	16.0%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title III	\$0.00						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	capital maintenance							\$23,232	\$0	\$2,880	\$0	\$0	\$0	\$0	\$1,585
	minor remodel every 5 yr.	\$782,600	1.50%	\$10.75	4.0%	2.5%	3.0%	\$10,814	\$0	\$1,263	\$0	\$0	\$0	\$0	\$1,585
	minor remodel every 10 yr.	\$1,099,280	1.00%	\$15.10	4.0%	3.0%	5.0%	\$7,681	\$0	\$1,627	\$0	\$0	\$0	\$0	\$0
	major remodel every 20 yr.	\$2,190,560	11.00%	\$30.20	4.0%	8.0%	12.0%	\$4,837	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	direct costs (associated with direct operations)							\$23,826	\$528	\$543	\$559	\$576	\$593	\$611	\$629
	heating / cooling	\$70,616		\$0.97	3.00%	2.0%	3.0%	\$4,113	\$91	\$94	\$97	\$100	\$103	\$106	\$109
	lighting	\$48,776		\$0.67	3.00%	2.5%	3.0%	\$3,135	\$66	\$69	\$71	\$73	\$76	\$78	\$81
	electrical loads due to operations not included														
	cleaning	\$218,400		\$3.00	3.33%	2.0%	3.0%	\$13,583	\$291	\$300	\$310	\$321	\$331	\$342	\$354
	other utilities	\$72,800		\$1.00	1.67%	0.50%	1.0%	\$2,993	\$80	\$81	\$82	\$83	\$84	\$85	\$86
	indirect costs							\$69,947	\$1,417	\$1,471	\$1,527	\$1,585	\$1,645	\$1,708	\$1,773
	planned maintenance	\$329,784	1.5%	\$4.53	2.75%	2.5%	3.8%	\$22,355	\$456	\$473	\$491	\$509	\$528	\$548	\$569
	unplanned maintenance	\$439,712	2.0%	\$6.04	4.23%	3.5%	4.2%	\$32,752	\$632	\$659	\$687	\$716	\$747	\$778	\$811
	security	\$145,600		\$2.00	2.00%	2.0%	3.0%	\$8,680	\$188	\$194	\$200	\$206	\$212	\$218	\$225
	safety / fire protection	\$109,200		\$1.50	2.00%	2.0%	3.0%	\$6,380	\$141	\$145	\$150	\$154	\$159	\$164	\$168
	post-operation / DD&D														
	demolition	\$6,595,680	30.0%	\$90.60	1.50%	2.5%	3.0%		\$8,903	\$9,214	\$9,537	\$9,871	\$10,216	\$10,574	\$10,944

Alternative 5, DO NOTHING (CFA LCC Analysis Summary Sheet 1)

							17	18	19	20	21	22	23	24	
							2018	2019	2020	2021	2022	2023	2024	2025	
							1.693	1.638	1.683	1.736	1.779	1.829	1.880	1.933	
Discounted Annual Cost							\$92,499	\$1,072	\$1,250	\$1,094	\$4,307	\$1,005	\$1,085	\$996	\$995
Discount factor							0.053	0.4156	0.3947	0.3749	0.3560	0.3381	0.3211	0.3049	0.2895
Annual Costs							\$120,191	\$2,578	\$3,166	\$2,918	\$12,100	\$2,972	\$3,379	\$3,266	\$3,437
Escalated Annual Cost							\$120,401	\$2,578	\$3,452	\$3,020	\$12,100	\$2,972	\$3,332	\$3,332	\$3,568
Cumulative Discounted LCC								\$31,388	\$32,638	\$33,732	\$38,039	\$39,044	\$40,129	\$41,125	\$42,120
cost / sqft															
% of acquisition cost															
\$ / square foot															
annual increase															
Min															
Target															
Max															
Do Nothing (1200 Employee Reduction Scenario)															
CFA	AREA Sq. Ft	72,800													
Capital Requests		\$10,185													
capital acquisition		\$0.00													
Title I		\$0.00	10.100%		5.8%	10.0%	14.5%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Title II		\$0.00	14.000%		12.0%	14.0%	16.0%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Title III		\$0.00						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
capital maintenance								\$20,232	\$0	\$0	\$0	\$2,232	\$0	\$0	\$0
minor remodel every 5 yr.	\$782,600		2.500%	\$10.75	4.0%	2.5%	3.0%	5.0%	\$10,814	\$0	\$0	\$0	\$2,006	\$0	\$0
minor remodel every 10 yr.	\$1,099,280		5.000%	\$15.10	4.0%	3.0%	5.0%	7.0%	\$7,681	\$0	\$0	\$0	\$2,409	\$0	\$0
major remodel every 20 yr.	\$2,198,560		10.000%	\$30.20	4.0%	8.0%	10.0%	12.0%	\$4,817	\$0	\$0	\$0	\$4,817	\$0	\$0
direct costs (associated with direct operations)								\$20,830	\$668	\$668	\$709	\$730	\$752	\$775	\$823
heating / cooling	\$70,616			\$0.97	1.000%	2.0%	3.0%	4.0%	\$4,113	\$116	\$119	\$123	\$126	\$130	\$134
lighting	\$48,776			\$0.67	1.000%	2.5%	3.0%	5.0%	\$3,133	\$87	\$90	\$93	\$96	\$99	\$103
electrical loads due to operations not included															
cleaning	\$218,400			\$3.00	1.000%	2.0%	3.0%	5.0%	\$13,581	\$378	\$390	\$403	\$417	\$431	\$445
other utilities	\$72,800			\$1.00	1.000%	0.50%	1.0%	2.0%	\$2,997	\$88	\$89	\$90	\$91	\$92	\$93
indirect costs								\$69,847	\$1,911	\$1,984	\$2,059	\$2,138	\$2,220	\$2,304	\$2,494
planned maintenance	\$329,784		1.5%	\$4.53	1.000%	2.5%	3.8%	5.0%	\$22,355	\$612	\$635	\$659	\$684	\$710	\$737
unplanned maintenance	\$439,712		2.0%	\$6.04	1.000%	3.5%	4.2%	5.0%	\$32,792	\$881	\$919	\$957	\$998	\$1,040	\$1,084
security	\$145,600			\$2.00	1.000%	2.0%	3.0%	4.0%	\$8,489	\$238	\$245	\$253	\$260	\$268	\$276
safety / fire protection	\$109,200			\$1.50	1.000%	2.0%	3.0%	4.0%	\$6,360	\$179	\$184	\$190	\$195	\$201	\$207
post-operation / DD&D															
demolition	\$6,595,680		30.0%	\$90.60	1.000%	2.5%	3.0%	5.0%	\$11,723	\$12,134	\$12,558	\$12,988	\$13,453	\$13,924	\$14,411

							25	26	27	28	29	30	31	32	33	34	35	
							2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	
							1.987	2.042	2.100	2.158	2.219	2.281	2.345	2.410	2.476	2.547	2.619	
Discounted Annual Cost							\$50,530	\$1,647	\$928	\$961	\$899	\$940	\$2,167	\$857	\$881	\$840	\$618	\$0
Discount factor							0.650	0.2750	0.2611	0.2480	0.2355	0.2237	0.2124	0.2017	0.1916	0.1819	0.1726	0.1641
Annual Costs							\$120,191	\$5,988	\$3,552	\$3,876	\$3,816	\$4,205	\$10,203	\$4,249	\$4,600	\$4,616	\$3,578	\$0
Escalated Annual Cost							\$120,900	\$6,106	\$3,552	\$4,001	\$3,816	\$4,510	\$10,203	\$4,249	\$4,876	\$4,690	\$3,578	\$0
Cumulative Discounted LCC								\$43,706	\$44,694	\$45,655	\$46,554	\$47,494	\$49,661	\$50,518	\$51,400	\$52,239	\$52,858	\$52,858
cost / sqft																		
% of acquisition cost																		
\$ / square foot																		
annual increase																		
Min																		
Target																		
Max																		
Do Nothing (1200 Employee Reduction Scenario)																		
CFA	AREA Sq. Ft	72,800																
	Capital Requests	\$19,185																
	capital acquisition	\$0.00																
	Title I	\$0.00	10.100%		5.8%	10.0%	14.5%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title II	\$0.00	14.000%		12.0%	14.0%	16.0%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title III	\$0.00						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	capital maintenance							\$22,232	\$2,441	\$0	\$0	\$0	\$0	\$6,164	\$0	\$0	\$0	\$0
	minor remodel every 5 yr.	\$782,600	1.500%	\$10.75	4.0%	2.5%	3.0%	5.0%	\$10,814	\$2,441	\$0	\$0	\$0	\$2,538	\$0	\$0	\$0	\$0
	minor remodel every 10 yr.	\$1,099,280	5.000%	\$15.10	4.0%	3.0%	5.0%	7.0%	\$7,681	\$0	\$0	\$0	\$0	\$3,565	\$0	\$0	\$0	\$0
	major remodel every 20 yr.	\$2,198,560	10.000%	\$30.20	4.0%	8.0%	10.0%	12.0%	\$4,817	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	direct costs (associated with direct operations)							\$22,828	\$848	\$874	\$901	\$928	\$957	\$985	\$1,016	\$1,048	\$1,080	\$841
	heating / cooling	\$70,616		\$0.97	1.000%	2.0%	3.0%	4.0%	\$4,113	\$140	\$151	\$155	\$160	\$165	\$170	\$175	\$180	\$144
	lighting	\$48,776		\$0.67	1.000%	2.5%	3.0%	5.0%	\$3,133	\$114	\$118	\$122	\$127	\$131	\$135	\$140	\$145	\$118
	electrical loads due to operations not included																	
	cleaning	\$218,400		\$3.00	1.000%	2.0%	3.0%	5.0%	\$13,581	\$401	\$507	\$524	\$542	\$560	\$578	\$598	\$618	\$499
	other utilities	\$72,800		\$1.00	1.000%	0.50%	1.0%	2.0%	\$2,997	\$96	\$97	\$99	\$100	\$101	\$102	\$103	\$105	\$81
	indirect costs							\$69,847	\$2,579	\$2,678	\$2,781	\$2,880	\$2,988	\$3,114	\$3,233	\$3,357	\$3,487	\$2,737
	planned maintenance	\$329,784	1.5%	\$4.53	1.000%	2.5%	3.8%	5.0%	\$22,355	\$823	\$854	\$886	\$920	\$954	\$990	\$1,028	\$1,066	\$1,106
	unplanned maintenance	\$439,712	2.0%	\$6.04	1.000%	3.5%	4.2%	5.0%	\$32,792	\$1,228	\$1,280	\$1,334	\$1,390	\$1,449	\$1,511	\$1,575	\$1,641	\$1,711
	security	\$145,600		\$2.00	1.000%	2.0%	3.0%	4.0%	\$8,489	\$302	\$311	\$320	\$330	\$340	\$350	\$361	\$371	\$382
	safety / fire protection	\$109,200		\$1.50	1.000%	2.0%	3.0%	4.0%	\$6,360	\$226	\$233	\$240	\$247	\$255	\$263	\$270	\$278	\$287
	post-operation / DO&D																	
	demolition	\$6,595,680	30.0%	\$90.60	1.000%	2.5%	3.0%	5.0%	\$15,437	\$16,978	\$18,537	\$17,110	\$17,715	\$18,325	\$18,976	\$19,641	\$20,328	\$19,904

Alternative 5, DO NOTHING (CFA LCC Analysis Summary Sheet 2)

Alternative 5, DO NOTHING (INTEC LCC Analysis Summary Sheet 1)

										17	18	19	20	21	22	23	24	
										2018	2019	2020	2021	2022	2023	2024	2025	
										1.553	1.638	1.683	1.730	1.779	1.829	1.880	1.933	
Discounted Annual Cost										\$18,926	\$1,100	\$1,280	\$1,496	\$5,551	\$1,031	\$1,015	\$999	\$1,210
Discount factor										0.663	0.6156	0.5947	0.5749	0.5560	0.5381	0.5211	0.5040	0.4869
Annual Costs										\$28,365,126	\$2,646	\$3,242	\$3,991	\$15,593	\$3,050	\$3,161	\$3,275	\$4,179
Escalated Annual Cost										\$4,945,925	\$2,646	\$3,581	\$4,777	\$15,593	\$3,050	\$3,161	\$3,275	\$4,911
Cumulative Discounted LCC											\$34,561	\$35,841	\$37,337	\$42,888	\$43,919	\$44,933	\$45,932	\$47,142
cost / sqft																		
% of acquisition cost																		
\$ / square foot																		
annual increase																		
Min																		
Target																		
Max																		
Do Nothing (1200 Employee Reduction Scenario)																		
INTEC	AREA Sq. Ft	103,000																
	Capital Requests	\$9,184																
	capital acquisition	\$0.00																
	Title I	\$0.00	10.00%			5.8%	10.0%	14.5%										
	Title II	\$0.00	14.00%			12.0%	14.0%	16.0%										
	Title III	\$0.00																
	capital maintenance																	
	minor remodel every 5 yr.	\$1,107,250	1.00%	\$10.75	4.0%	2.5%	3.0%	5.0%										
	minor remodel every 10 yr.	\$1,555,300	1.50%	\$15.10	4.0%	3.0%	5.0%	7.0%										
	major remodel every 20 yr.	\$3,110,600	3.00%	\$30.20	4.0%	8.0%	10.0%	12.0%										
	direct costs (associated with direct operations)																	
	heating / cooling	\$99,910		\$0.97	2.00%	2.0%	3.0%	4.0%										
	lighting	\$69,910		\$0.67	2.00%	2.5%	3.0%	5.0%										
	electrical loads (due to operations not included)																	
	cleaning	\$309,000		\$3.00	2.00%	2.0%	3.0%	5.0%										
	other utilities	\$103,000		\$1.00	1.00%	0.50%	1.0%	2.0%										
	indirect costs																	
	planned maintenance	\$466,590	1.5%	\$4.53	2.00%	2.5%	3.8%	5.0%										
	unplanned maintenance	\$622,120	2.0%	\$6.04	4.00%	3.5%	4.2%	5.0%										
	security	\$206,000		\$2.00	2.00%	2.0%	3.0%	4.0%										
	safety / fire protection	\$154,500		\$1.50	2.00%	2.0%	3.0%	4.0%										
	post-operation / DD&D																	
	demolition	\$9,331,800	30.0%	\$90.60	2.00%	2.5%	3.0%	5.0%										

										25	26	27	28	29	30	31	32	33	34	35															
										2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036															
										1.987	2.042	2.100	2.158	2.219	2.281	2.345	2.410	2.478	2.547	2.619															
										Discounted Annual Cost											\$56,999	\$1,779	\$1,015	\$937	\$922	\$908	\$2,728	\$880	\$866	\$853	\$839	\$0			
										Discount																									
										factor											0.053														
										Annual Costs											\$142,726	\$6,469	\$3,886	\$3,778	\$3,916	\$4,059	\$12,843	\$4,361	\$4,521	\$4,687	\$4,859	\$0			
										Escalated Annual Cost											\$145,978	\$6,469	\$4,136	\$3,778	\$3,916	\$4,059	\$12,843	\$4,361	\$4,521	\$4,687	\$4,859	\$0			
										Cumulative Discounted LCC											\$48,921	\$49,936	\$50,873	\$51,795	\$52,703	\$55,431	\$56,310	\$57,176	\$58,029	\$58,868	\$58,868				
										cost / sqft	% of acquisition cost	\$ / square foot	annual increase	Min	Target	Max																			
Do Nothing (1200 Employee Reduction Scenario)																																			
INTEC	AREA Sq. Ft	103,000																																	
	Capital Requests	\$9,184																																	
	capital acquisition	\$0.00																																	
	Title I	\$0.00	10.100%																																
	Title II	\$0.00	14.000%																																
	Title III	\$0.00																																	
	capital maintenance																																		
	minor remodel every 5 yr.	\$1,107,250	3.500%	\$10.75	4.0%	2.5%	3.0%	5.0%																											
	minor remodel every 10 yr.	\$1,555,300	5.000%	\$15.10	4.0%	3.0%	5.0%	7.0%																											
	major remodel every 20 yr.	\$3,110,600	10.000%	\$30.20	4.0%	8.0%	10.0%	12.0%																											
	direct costs (associated with direct operations)																																		
	heating / cooling	\$99,910		\$0.97	3.000%	2.0%	3.0%	4.0%																											
	lighting	\$69,010		\$0.67	2.500%	2.5%	3.0%	5.0%																											
	electrical loads due to operations not included																																		
	cleaning	\$309,000		\$3.00	3.333%	2.0%	3.0%	5.0%																											
	other utilities	\$103,000		\$1.00	1.667%	0.50%	1.0%	2.0%																											
	indirect costs																																		
	planned maintenance	\$466,590	1.5%	\$4.53	3.767%	2.5%	3.8%	5.0%																											
	unplanned maintenance	\$622,120	2.0%	\$6.04	4.733%	3.5%	4.2%	5.0%																											
	security	\$206,000		\$2.00	3.000%	2.0%	3.0%	4.0%																											
	safety / fire protection	\$154,500		\$1.50	3.000%	2.0%	3.0%	4.0%																											
	post-operation / DD&D																																		
	demolition	\$9,331,800	30.0%	\$90.60	3.500%	2.5%	3.0%	5.0%																											
																			</																

Alternative 5, DO NOTHING (INTEC LCC Analysis Summary Sheet 2)

										1	2	3	4	5	6	7	8	
										2002	2003	2004	2005	2006	2007	2008	2009	
										1.024	1.053	1.082	1.112	1.144	1.176	1.209	1.242	
										Discounted Annual Cost	\$3,048	\$2,047	\$2,357	\$909	\$2,083	\$1,884	\$2,715	\$906
										Discount factor	0.9497	0.9010	0.8565	0.8134	0.7724	0.7330	0.6960	0.6616
										Annual Costs	\$3,159	\$2,211	\$2,631	\$1,191	\$2,697	\$1,477	\$3,898	\$1,370
										Escalated Annual Cost	\$3,209	\$2,269	\$2,752	\$1,191	\$2,808	\$1,513	\$4,435	\$1,370
										Cumulative Discounted LCC	\$3,048	\$1,094	\$7,452	\$8,421	\$10,503	\$11,587	\$14,303	\$15,209
										cost / sqft								
										% of acquisition cost								
										\$ / square foot								
										annual increase								
										Min	Target	Max						

										17	18	19	20	21	22	23	24
										2018	2019	2020	2021	2022	2023	2024	2025
										1,593	1,638	1,683	1,730	1,779	1,829	1,880	1,933
										Discounted Annual Cost							
										factor	0.953						
										Annual Costs	\$97,362						
										Escalated Annual Cost	\$99,720						
Cumulative Discounted LCC																	
cost / sqft																	
% of acquisition cost																	
\$ / square foot																	
annual increase																	
Min																	
Target																	
Max																	
Do Nothing (1200 Employee Reduction Scenario)																	
TRA	AREA Sq. Ft	52,600															
Capital Requests		\$12,021								\$12,021							
capital acquisition		\$0.00								\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Title I		\$0.00	10.100%			5.8%	10.0%	14.5%		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Title II		\$0.00	14.000%			12.0%	14.0%	16.0%		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Title III		\$0.00								\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
capital maintenance										\$16,096	\$0	\$0	\$0	\$0	\$0	\$0	\$0
minor remodel every 5 yr.	\$565,450		3.500%	\$10.75	4.0%	2.5%	3.0%	5.0%		\$7,124	\$0	\$0	\$0	\$1,239	\$0	\$0	\$0
minor remodel every 10 yr.	\$794,260		5.000%	\$15.10	4.0%	3.0%	5.0%	7.0%		\$9,492	\$0	\$0	\$0	\$1,740	\$0	\$0	\$0
major remodel every 20 yr.	\$1,588,520		10.000%	\$30.20	4.0%	8.0%	10.0%	12.0%		\$3,481	\$0	\$0	\$0	\$3,481	\$0	\$0	\$0
direct costs (associated with direct operations)										\$17,977	\$487	\$502	\$517	\$533	\$549	\$565	\$583
heating / cooling	\$51,022			\$0.97	3.000%	2.0%	3.0%	4.0%		\$7,034	\$84	\$87	\$89	\$92	\$95	\$98	\$101
lighting	\$35,242			\$0.67	3.500%	2.5%	3.0%	5.0%		\$2,314	\$63	\$65	\$68	\$70	\$73	\$75	\$78
electrical loads due to operations not included																	
cleaning	\$157,800			\$3.00	3.333%	2.0%	3.0%	5.0%		\$19,024	\$276	\$285	\$294	\$304	\$314	\$325	\$335
other utilities	\$52,600			\$1.00	1.923%	0.50%	1.0%	2.0%		\$2,295	\$64	\$65	\$66	\$66	\$67	\$68	\$69
indirect costs										\$59,667	\$1,394	\$1,447	\$1,502	\$1,560	\$1,619	\$1,681	\$1,745
planned maintenance	\$238,278		1.5%	\$4.53	3.767%	2.5%	3.8%	5.0%		\$16,511	\$447	\$464	\$481	\$499	\$518	\$537	\$559
unplanned maintenance	\$317,704		2.0%	\$6.04	4.233%	3.5%	4.2%	5.0%		\$24,299	\$643	\$670	\$698	\$728	\$759	\$791	\$824
security	\$105,200			\$2.00	3.000%	2.0%	3.0%	4.0%		\$6,255	\$174	\$179	\$184	\$190	\$196	\$202	\$208
safety / fire protection	\$78,900			\$1.50	3.846%	2.0%	3.0%	4.0%		\$4,692	\$130	\$134	\$138	\$143	\$147	\$151	\$156
post-operation / DD&D																	
demolition	\$4,765,560		30.0%	\$90.60	3.500%	2.5%	3.0%	5.0%		\$8,553	\$8,852	\$9,162	\$9,482	\$9,814	\$10,158	\$10,513	\$10,881

										25	26	27	28	29	30	31	32	33	34	35
										2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
										1,987	2,042	2,100	2,158	2,219	2,281	2,345	2,410	2,478	2,547	2,619
										Discounted Annual Cost										
										factor	0.953									
										Annual Costs	\$97,362									
										Escalated Annual Cost	\$99,720									
Cumulative Discounted LCC																				
cost / sqft																				
% of acquisition cost																				
\$ / square foot																				
annual increase																				
Min																				
Target																				
Max																				
Do Nothing (1200 Employee Reduction Scenario)																				
TRA	AREA Sq. Ft	52,600																		
Capital Requests		\$12,021								\$12,021										
capital acquisition		\$0.00								\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Title I		\$0.00	10.100%			5.8%	10.0%	14.5%		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Title II		\$0.00	14.000%			12.0%	14.0%	16.0%		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Title III		\$0.00								\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
capital maintenance										\$16,096	\$1,507	\$0	\$0	\$0	\$0	\$4,410	\$0	\$0	\$0	\$0
minor remodel every 5 yr.	\$565,450		3.500%	\$10.75	4.0%	2.5%	3.0%	5.0%		\$7,124	\$1,507	\$0	\$0	\$0	\$0	\$1,834	\$0	\$0	\$0	\$0
minor remodel every 10 yr.	\$794,260		5.000%	\$15.10	4.0%	3.0%	5.0%	7.0%		\$9,492	\$0	\$0	\$0	\$0	\$2,576	\$0	\$0	\$0	\$0	\$0
major remodel every 20 yr.	\$1,588,520		10.000%	\$30.20	4.0%	8.0%	10.0%	12.0%		\$3,481	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
direct costs (associated with direct operations)										\$17,977	\$619	\$637	\$657	\$677	\$698	\$719	\$741	\$764	\$788	\$812
heating / cooling	\$51,022			\$0.97	3.000%	2.0%	3.0%	4.0%		\$7,034	\$107	\$110	\$113	\$117	\$120	\$124	\$128	\$131	\$135	\$139
lighting	\$35,242			\$0.67	3.500%	2.5%	3.0%	5.0%		\$2,314	\$83	\$86	\$89	\$92	\$96	\$99	\$102	\$106	\$110	\$114
electrical loads due to operations not included																				
cleaning	\$157,800			\$3.00	3.333%	2.0%	3.0%	5.0%		\$19,024	\$358	\$370	\$382	\$395	\$408	\$422	\$436	\$451	\$466	\$481
other utilities	\$52,600			\$1.00	1.923%	0.50%	1.0%	2.0%		\$2,295	\$70	\$71	\$72	\$73	\$74	\$75	\$76	\$77	\$78	\$79
indirect costs										\$59,667	\$1,882	\$1,954	\$2,029	\$2,107	\$2,187	\$2,271	\$2,359	\$2,449	\$2,544	\$2,641
planned maintenance	\$238,278		1.5%	\$4.53	3.767%	2.5%	3.8%	5.0%		\$16,511	\$601	\$623	\$647	\$671	\$696	\$722	\$750	\$778	\$807	\$838
unplanned maintenance	\$317,704		2.0%	\$6.04	4.233%	3.5%	4.2%	5.0%		\$24,299	\$896	\$934	\$973	\$1,014	\$1,057	\$1,102	\$1,149	\$1,197	\$1,248	\$1,301
security	\$105,200			\$2.00	3.000%	2.0%	3.0%	4.0%		\$6,255	\$220	\$227	\$234	\$241	\$248	\$255	\$263	\$271	\$279	\$287
safety / fire protection	\$78,900			\$1.50	3.846%	2.0%	3.0%	4.0%		\$4,692	\$165	\$170	\$175	\$181	\$186	\$192	\$197	\$203	\$209	\$216
post-operation / DD&D																				
demolition	\$4,765,560		30.0%	\$90.60	3.500%	2.5%	3.0%	5.0%		\$11,262	\$11,656	\$12,064	\$12,487	\$12,924	\$13,376	\$13,844	\$14,329	\$14,830	\$15,349	\$0

Alternative 5, DO NOTHING (TRA LCC Analysis Summary Sheet 2)

										1	2	3	4	5	6	7	8
										2002	2003	2004	2005	2006	2007	2008	2009
										1.024	1.053	1.082	1.112	1.144	1.176	1.209	1.242
										Discounted Annual Cost							
										Discount factor	0.993						
										Annual Costs	\$179,104	\$4,661	\$4,726	\$6,824	\$7,480	\$17,313	\$16,951
										Escalated Annual Cost	\$208,581	\$4,661	\$4,726	\$6,983	\$7,761	\$19,046	\$19,070
										Cumulative Discounted LCC		\$4,426	\$8,688	\$14,609	\$20,973	\$35,685	\$49,673
										cost / sqft							
										% of acquirable cost							
										\$ / square foot							
										annual increase							
										Min	Target	Max					

Alternative 6, INTEC SERF (LCC Analysis Summary Sheet 2)

Alternative 7, INTEC & TRA SERF (LCC Analysis Summary Sheet 1)

Alternative 7, INTEC & TRA SERF (LCC Analysis Summary Sheet 2)

										1	2	3	4	5	6	7	8	
										2002	2003	2004	2005	2006	2007	2008	2009	
										1.024	1.053	1.082	1.112	1.144	1.178	1.208	1.242	
Discounted Annual Cost										\$115,983	\$6,422	\$6,301	\$6,964	\$6,241	\$12,244	\$11,156	\$4,237	\$1,885
Discount factor 0.943											0.960	0.909	0.858	0.808	0.754	0.703	0.656	0.609
Annual Costs										\$246,378	\$6,762	\$6,987	\$10,113	\$9,865	\$15,004	\$14,172	\$6,083	\$2,848
Escalated Annual Cost										\$284,042	\$6,762	\$6,987	\$10,349	\$10,132	\$15,851	\$15,251	\$6,825	\$2,949
											\$6,422	\$12,723	\$21,567	\$29,928	\$42,072	\$53,228	\$57,468	\$59,351
Cumulative Discounted LCC																		
cost / sq ft																		
% of acquisition cost																		
Min Target Max																		
287 occupants 221 SFT/occupant																		
AREA Sq. Ft																		
Capital Requests																		
capital acquisition \$13,828,662 \$236.00										\$30,748	\$0	\$0	\$2,957	\$2,508	\$6,748	\$7,177	\$2,589	\$0
Title I \$16.00 8.00%										\$944	\$0	\$0	\$944	\$0	\$0	\$0	\$0	\$0
Title II \$20.00 10.00%										\$1,180	\$0	\$0	\$0	\$1,180	\$0	\$0	\$0	\$0
Construction \$200.00										\$11,861	\$0	\$0	\$0	\$0	\$5,901	\$5,901	\$0	\$0
capital maintenance \$44,744										\$44,744	\$0	\$0	\$0	\$0	\$1,347	\$0	\$0	\$0
minor remodel every 5 yr \$467,380 2.50%										\$10,948	\$0	\$0	\$0	\$0	\$1,347	\$0	\$0	\$0
minor remodel every 10 yr \$596,283 5.00%										\$14,118	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
major remodel every 20 yr \$1,192,565 10.00%										\$10,677	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
direct costs (associated with direct operations) \$47,034										\$47,034	\$1,924	\$1,875	\$2,033	\$2,083	\$2,154	\$2,218	\$1,007	\$930
heating / cooling \$2,697 2.00%										\$8,985	\$331	\$340	\$351	\$361	\$372	\$383	\$183	\$163
lighting \$38,638 2.00%										\$6,778	\$230	\$237	\$246	\$254	\$263	\$272	\$138	\$117
electrical costs due to equipment not included \$38,631										\$1,027	\$1,058	\$1,085	\$1,131	\$1,168	\$1,208	\$500	\$404	
cleaning \$69,007										\$6,844	\$335	\$338	\$342	\$346	\$350	\$355	\$176	\$148
other utilities \$131,488										\$4,838	\$5,011	\$5,201	\$5,387	\$5,592	\$5,814	\$2,477	\$2,019	
indirect costs \$131,488										\$4,838	\$5,011	\$5,201	\$5,387	\$5,592	\$5,814	\$2,477	\$2,019	
planned maintenance 1.5% \$3,54 2.00%										\$4,484	\$1,558	\$1,613	\$1,674	\$1,737	\$1,802	\$1,870	\$875	\$721
unplanned maintenance 0.8% \$1,77 4.33%										\$51,951	\$2,086	\$2,170	\$2,262	\$2,358	\$2,458	\$2,562	\$852	\$623
security \$177,021										\$21,846	\$883	\$702	\$723	\$744	\$767	\$790	\$471	\$412
safety / fire protection \$38,611										\$13,884	\$512	\$526	\$542	\$558	\$575	\$592	\$299	\$253
post-operation / O&M																		
demolition \$1,114,082 8.0%										\$18,08	\$2,50%	2.5%	3.0%	5.0%				
											\$31,076	\$32,085	\$33,219	\$34,381	\$35,585	\$36,830	\$13,290	\$10,285

[illegible]

Alternative 8, TRA SERF & DO NOTHING AT INTEC (LCC Analysis Summary Sheet 1)

										18	19	20	21	22	23	24	
										2019	2020	2021	2022	2023	2024	2025	
										1.938	1.983	1.730	1.779	1.826	1.880	1.933	
										Discounted Annual Cost							
										Discount factor	0.993						
										Annual Costs							
										Escalated Annual Cost							
										\$115,963	\$1,865	\$2,070	\$6,115	\$1,875	\$1,558	\$1,532	\$1,734
										\$246,378	0.3947	0.3749	0.3580	0.3381	0.3211	0.3045	0.2895
										\$264,942	\$4,724	\$5,523	\$17,177	\$5,842	\$4,853	\$5,025	\$5,988
											\$5,043	\$6,309	\$17,177	\$6,742	\$4,853	\$5,025	\$6,720
											\$82,264	\$84,334	\$90,449	\$92,424	\$93,982	\$95,514	\$97,248
</																	

							1	2	3	4	5	6	7	8
							2002	2003	2004	2005	2006	2007	2008	2009
							1.024	1.053	1.082	1.112	1.144	1.176	1.209	1.242
							Discounted Annual Cost							
							factor	0.983						
							Annual Costs	\$63,746	\$767	\$796	\$825	\$854	\$1,048	\$962
							Estimated Annual Cost	\$65,266	\$767	\$796	\$825	\$854	\$1,048	\$962
Cumulative Discounted LCC														
Do Nothing (1200 Employee Reduction & 300 To Town Scenario)							cost / sqft	% of acquisition cost	\$ / square foot	annual increase	Min	Target	Max	
CFA	AREA Sq. Ft	37,600												
	Capital Requests	\$2,120												
	capital acquisition	\$0.00												
	Title I	\$0.00	10.100%		5.8%	10.0%	14.5%		\$0	\$0	\$0	\$0	\$0	\$0
	Title II	\$0.00	14.000%		12.0%	14.0%	16.0%		\$0	\$0	\$0	\$0	\$0	\$0
	Title III	\$0.00							\$0	\$0	\$0	\$0	\$0	\$0
	capital maintenance								\$11,999	\$0	\$0	\$0	\$511	\$0
	minor remodel every 5 yr.	\$484,200	3.500%	\$10.75	4.0%	2.5%	3.0%	5.0%	\$5,385	\$0	\$0	\$0	\$511	\$0
	minor remodel every 10 yr.	\$587,760	5.000%	\$15.10	4.0%	3.0%	5.0%	7.0%	\$3,926	\$0	\$0	\$0	\$0	\$0
	major remodel every 20 yr.	\$1,135,520	10.000%	\$30.20	4.0%	8.0%	10.0%	12.0%	\$2,488	\$0	\$0	\$0	\$0	\$0
	direct costs (associated with direct operations)								\$12,596	\$219	\$225	\$232	\$239	\$246
	heating / cooling	\$36,472		\$0.97	2.000%	2.0%	3.0%	4.0%	\$2,174	\$38	\$30	\$40	\$41	\$42
	lighting	\$25,192		\$0.67	2.000%	2.5%	3.0%	5.0%	\$1,659	\$26	\$27	\$28	\$29	\$30
	electronic loads due to operations not isolated													
	cleaning	\$112,800		\$3.00	2.333%	2.0%	3.0%	5.0%	\$7,184	\$177	\$121	\$125	\$129	\$133
	other utilities	\$37,600		\$1.00	1.667%	0.500%	1.0%	2.0%	\$1,580	\$38	\$38	\$39	\$39	\$40
	indirect costs								\$37,816	\$549	\$571	\$593	\$615	\$638
	planned maintenance	\$170,328	1.5%	\$4.53	2.767%	2.5%	3.8%	5.0%	\$11,634	\$177	\$164	\$191	\$198	\$205
	unplanned maintenance	\$227,104	2.0%	\$6.04	4.200%	3.5%	4.2%	5.0%	\$17,358	\$237	\$247	\$258	\$269	\$280
	security	\$75,200		\$2.00	2.000%	2.0%	3.0%	4.0%	\$4,483	\$77	\$80	\$82	\$85	\$87
	safety / fire protection	\$56,400		\$1.50	2.000%	2.0%	3.0%	4.0%	\$3,362	\$59	\$60	\$62	\$64	\$66
	post-operation / DD&D													
	demolition	\$3,496,560	30.0%	\$90.60	2.000%	2.5%	3.0%	5.0%	\$3,526	\$3,659	\$3,787	\$3,920	\$4,057	\$4,199

							9	10	11	12	13	14	15	16
							2010	2011	2012	2013	2014	2015	2016	2017
							1.277	1.313	1.350	1.387	1.426	1.466	1.507	1.550
							Discounted Annual Cost							
							factor	0.983						
							Annual Costs	\$63,746	\$1,267	\$2,541	\$1,091	\$1,130	\$1,416	\$1,363
							Estimated Annual Cost	\$65,266	\$1,336	\$2,541	\$1,091	\$1,130	\$1,520	\$1,433
Cumulative Discounted LCC														
Do Nothing (1200 Employee Reduction & 300 To Town Scenario)							cost / sqft	% of acquisition cost	\$ / square foot	annual increase	Min	Target	Max	
CFA	AREA Sq. Ft	37,600												
	Capital Requests	\$2,120												
	capital acquisition	\$0.00												
	Title I	\$0.00	10.100%		5.8%	10.0%	14.5%		\$0	\$0	\$0	\$0	\$0	\$0
	Title II	\$0.00	14.000%		12.0%	14.0%	16.0%		\$0	\$0	\$0	\$0	\$0	\$0
	Title III	\$0.00							\$0	\$0	\$0	\$0	\$0	\$0
	capital maintenance								\$11,999	\$0	\$1,488	\$0	\$0	\$819
	minor remodel every 5 yr.	\$484,200	3.500%	\$10.75	4.0%	2.5%	3.0%	5.0%	\$5,385	\$0	\$647	\$0	\$0	\$819
	minor remodel every 10 yr.	\$587,760	5.000%	\$15.10	4.0%	3.0%	5.0%	7.0%	\$3,926	\$0	\$840	\$0	\$0	\$0
	major remodel every 20 yr.	\$1,135,520	10.000%	\$30.20	4.0%	8.0%	10.0%	12.0%	\$2,488	\$0	\$0	\$0	\$0	\$0
	direct costs (associated with direct operations)								\$12,596	\$216	\$264	\$293	\$301	\$310
	heating / cooling	\$36,472		\$0.97	2.000%	2.0%	3.0%	4.0%	\$2,174	\$48	\$49	\$51	\$52	\$54
	lighting	\$25,192		\$0.67	2.000%	2.5%	3.0%	5.0%	\$1,659	\$34	\$36	\$37	\$38	\$40
	electronic loads due to operations not isolated													
	cleaning	\$112,800		\$3.00	2.333%	2.0%	3.0%	5.0%	\$7,184	\$152	\$157	\$162	\$168	\$173
	other utilities	\$37,600		\$1.00	1.667%	0.500%	1.0%	2.0%	\$1,580	\$42	\$42	\$43	\$43	\$44
	indirect costs								\$37,816	\$741	\$769	\$798	\$829	\$860
	planned maintenance	\$170,328	1.5%	\$4.53	2.767%	2.5%	3.8%	5.0%	\$11,634	\$236	\$247	\$256	\$266	\$276
	unplanned maintenance	\$227,104	2.0%	\$6.04	4.200%	3.5%	4.2%	5.0%	\$17,358	\$331	\$345	\$359	\$375	\$390
	security	\$75,200		\$2.00	2.000%	2.0%	3.0%	4.0%	\$4,483	\$89	\$101	\$104	\$108	\$111
	safety / fire protection	\$56,400		\$1.50	2.000%	2.0%	3.0%	4.0%	\$3,362	\$74	\$76	\$78	\$81	\$83
	post-operation / DD&D													
	demolition	\$3,496,560	30.0%	\$90.60	2.000%	2.5%	3.0%	5.0%	\$4,655	\$4,818	\$4,997	\$5,181	\$5,342	\$5,529

Alternative 9, DO NOTHING (CFA LCC Analysis Summary Sheet 1)

										17	18	19	20	21	22	23	24			
										2018	2019	2020	2021	2022	2023	2024	2025			
										1.292	1.636	1.683	1.739	1.779	1.829	1.882	1.933			
										Discounted Annual Cost	\$24,495	\$660	\$658	\$699	\$2,231	\$525	\$613	\$632	\$601	
										Discount Factor	6.093	0.4150	0.3947	0.3749	0.3568	0.3381	0.3211	0.3049	0.2885	
										Annual Costs	\$63,746	\$1,348	\$1,667	\$1,597	\$6,268	\$1,554	\$1,010	\$1,744	\$1,729	
										Escalated Annual Cost	\$65,068	\$1,348	\$1,839	\$1,700	\$6,268	\$1,554	\$2,159	\$1,810	\$1,729	
Cumulative Discounted LCC											\$13,162	\$13,820	\$14,419	\$16,650	\$17,175	\$17,789	\$18,320	\$18,821		
Do Nothing (1200 Employee Reduction & 300 To Town Scenario)										cost / sq ft	% of acquisition cost	\$ / square foot	annual increase	Min	Target	Max				
CFA	AREA Sq. Ft	37,600																		
	Capital Requests	\$2,120										\$2,120	\$0	\$270	\$150	\$0	\$0	\$300	\$75	\$0
	capital acquisition	\$0.00										\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title I	\$0.00	10.00%			5.8%	10.0%	14.5%				\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title II	\$0.00	14.00%			12.0%	14.0%	16.0%				\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title III	\$0.00										\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	capital maintenance											\$11,999	\$0	\$0	\$0	\$4,768	\$0	\$0	\$0	\$0
	minor remodel every 5 yr.	\$404,200	3.00%	\$10.75	4.0%	2.5%	3.0%	5.0%				\$5,980	\$0	\$0	\$0	\$1,036	\$0	\$0	\$0	\$0
	minor remodel every 10 yr.	\$567,760	5.00%	\$15.10	4.0%	3.0%	5.0%	7.0%				\$3,928	\$0	\$0	\$0	\$1,244	\$0	\$0	\$0	\$0
	major remodel every 20 yr.	\$1,135,520	10.00%	\$30.20	4.0%	8.0%	10.0%	12.0%				\$2,488	\$0	\$0	\$0	\$2,488	\$0	\$0	\$0	\$0
	direct costs (associated with direct operations)											\$12,988	\$349	\$360	\$371	\$382	\$393	\$405	\$418	\$430
	heating / cooling	\$36,472		\$0.97	2.00%	2.0%	3.0%	4.0%				\$2,174	\$60	\$62	\$64	\$66	\$68	\$70	\$72	\$74
	lighting	\$25,192		\$0.67	2.50%	2.5%	3.0%	5.0%				\$1,659	\$45	\$47	\$49	\$50	\$52	\$54	\$56	\$58
	electrical loads due to operations not included																			
	cleaning	\$112,880		\$3.00	3.33%	2.0%	3.0%	5.0%				\$7,184	\$197	\$204	\$211	\$218	\$225	\$233	\$240	\$248
	other utilities	\$37,680		\$1.00	1.00%	0.50%	1.0%	2.0%				\$1,989	\$46	\$46	\$47	\$48	\$48	\$49	\$49	\$50
	indirect costs											\$37,636	\$999	\$1,037	\$1,077	\$1,118	\$1,161	\$1,205	\$1,251	\$1,299
	planned maintenance	\$179,328	1.5%	\$4.53	3.67%	2.5%	3.8%	5.0%				\$11,834	\$320	\$332	\$345	\$358	\$371	\$385	\$400	\$415
	unplanned maintenance	\$227,194	2.0%	\$6.04	4.23%	3.5%	4.2%	5.0%				\$17,358	\$461	\$480	\$501	\$522	\$544	\$567	\$591	\$616
	security	\$75,290		\$2.00	3.00%	2.0%	3.0%	4.0%				\$4,483	\$125	\$128	\$132	\$136	\$140	\$144	\$149	\$153
	safety / fire protection	\$58,460		\$1.50	2.00%	2.0%	3.0%	4.0%				\$3,362	\$93	\$96	\$99	\$102	\$105	\$108	\$112	\$115
	post-operation / DD&D																			
	demolition	\$3,406,560	30.0%	\$90.60	3.00%	2.5%	3.0%	5.0%				\$6,130	\$6,344	\$6,567	\$6,790	\$7,034	\$7,280	\$7,535	\$7,799	

										25	26	27	28	29	30	31	32	33	34		
										2026	2027	2028	2029	2030	2031	2032	2033	2034	2035		
										1.987	2.042	2.100	2.158	2.219	2.281	2.345	2.410	2.478	2.547		
										Discounted Annual Cost	\$24,495	\$639	\$485	\$477	\$479	\$518	\$1,125	\$448	\$441	\$443	\$428
										Discount Factor	6.653	0.2950	0.2611	0.2460	0.2335	0.2230	0.2134	0.2047	0.1965	0.1889	0.1828
										Annual Costs	\$63,746	\$3,053	\$1,857	\$1,925	\$1,995	\$2,318	\$5,295	\$2,222	\$2,383	\$2,438	\$2,475
										Escalated Annual Cost	\$65,068	\$3,053	\$1,857	\$1,925	\$1,995	\$2,318	\$5,295	\$2,222	\$2,383	\$2,438	\$2,475
Cumulative Discounted LCC											\$19,060	\$29,145	\$20,823	\$21,093	\$21,611	\$22,736	\$23,184	\$23,625	\$24,069	\$24,496	
Do Nothing (1200 Employee Reduction & 300 To Town Scenario)										cost / sq ft	% of acquisition cost	\$ / square foot	annual increase	Min	Target	Max					
CFA	AREA Sq. Ft	37,600																			
	Capital Requests	\$2,120										\$2,120	\$0	\$0	\$0	\$0	\$250	\$0	\$0	\$50	\$0
	capital acquisition	\$0.00										\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title I	\$0.00	10.00%			5.8%	10.0%	14.5%				\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title II	\$0.00	14.00%			12.0%	14.0%	16.0%				\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Title III	\$0.00										\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	capital maintenance											\$11,949	\$1,267	\$0	\$0	\$0	\$3,152	\$0	\$0	\$0	\$0
	minor remodel every 5 yr.	\$404,200	3.00%	\$10.75	4.0%	2.5%	3.0%	5.0%				\$5,980	\$1,267	\$0	\$0	\$0	\$1,311	\$0	\$0	\$0	\$0
	minor remodel every 10 yr.	\$567,760	5.00%	\$15.10	4.0%	3.0%	5.0%	7.0%				\$3,928	\$0	\$0	\$0	\$0	\$1,841	\$0	\$0	\$0	\$0
	major remodel every 20 yr.	\$1,135,520	10.00%	\$30.20	4.0%	8.0%	10.0%	12.0%				\$2,488	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	direct costs (associated with direct operations)											\$12,988	\$443	\$457	\$471	\$485	\$500	\$516	\$531	\$546	\$562
	heating / cooling	\$36,472		\$0.97	2.00%	2.0%	3.0%	4.0%				\$2,174	\$77	\$79	\$81	\$84	\$86	\$89	\$91	\$94	\$97
	lighting	\$25,192		\$0.67	2.50%	2.5%	3.0%	5.0%				\$1,659	\$60	\$62	\$64	\$66	\$68	\$71	\$73	\$76	\$79
	electrical loads due to operations not included																				
	cleaning	\$112,880		\$3.00	3.33%	2.0%	3.0%	5.0%				\$7,184	\$257	\$268	\$274	\$283	\$293	\$302	\$313	\$323	\$334
	other utilities	\$37,680		\$1.00	1.00%	0.50%	1.0%	2.0%				\$1,989	\$50	\$51	\$52	\$52	\$53	\$54	\$55	\$55	\$56
	indirect costs											\$37,636	\$1,349	\$1,400	\$1,454	\$1,510	\$1,568	\$1,628	\$1,691	\$1,756	\$1,823
	planned maintenance	\$179,328	1.5%	\$4.53	3.67%	2.5%	3.8%	5.0%				\$11,834	\$430	\$447	\$463	\$480	\$498	\$516	\$537	\$558	\$579
	unplanned maintenance	\$227,194	2.0%	\$6.04	4.23%	3.5%	4.2%	5.0%				\$17,358	\$642	\$669	\$698	\$727	\$758	\$790	\$823	\$858	\$893
	security	\$75,290		\$2.00	3.00%	2.0%	3.0%	4.0%				\$4,483	\$158	\$163	\$167	\$173	\$178	\$183	\$189	\$194	\$200
	safety / fire protection	\$58,460		\$1.50	2.00%	2.0%	3.0%	4.0%				\$3,362	\$118	\$122	\$126	\$129	\$133	\$137	\$141	\$146	\$150
	post-operation / DD&D																				
	demolition	\$3,406,560	30.0%	\$90.60	3.00%	2.5%	3.0%	5.0%				\$6,072	\$6,354	\$6,647	\$6,950	\$7,267	\$7,587	\$7,922	\$8,270	\$8,629	\$8,991

Alternative 9, DO NOTHING (CFA LCC Analysis Summary Sheet 2)

							1	2	3	4	5	6	7	8	
							2002	2003	2004	2005	2006	2007	2008	2009	
							1.024	1.053	1.082	1.112	1.144	1.176	1.209	1.242	
							Discounted Annual Cost								
							Discount factor: 0.050								
							Annual Costs								
							Escalated Annual Cost								
							\$90,000	\$639	\$629	\$618	\$1,287	\$931	\$691	\$578	\$569
							\$90,000	\$673	\$697	\$722	\$1,497	\$1,206	\$941	\$836	\$866
							\$90,000	\$673	\$697	\$722	\$1,582	\$1,206	\$966	\$836	\$866
								\$639	\$1,288	\$1,387	\$3,173	\$4,164	\$4,795	\$5,373	\$5,942
Do Nothing (1200 Employee Reduction & 300 To Town Scenario)															
INTEC															
AREA Sq. Ft							33,000								
Capital Requests															
capital acquisition							\$1,780								
Title I							\$0.00								
Title II							\$0.00	10.100%		5.8%	10.0%	14.5%			
Title III							\$0.00	14.000%		12.9%	14.0%	16.0%			
capital maintenance															
minor remodel every 5 yr.							\$354,750	5.000%	\$10.75	4.0%	2.5%	3.0%	5.0%		
minor remodel every 10 yr.							\$488,380	5.000%	\$16.10	4.0%	3.9%	5.0%	7.0%		
major remodel every 20 yr.							\$996,680	10.000%	\$30.20	4.0%	8.9%	19.0%	12.0%		
direct costs (associated with direct operations)															
heating / cooling							\$32,010		\$0.97	3.00%	2.8%	3.0%	4.6%		
lighting							\$22,110		\$0.67	3.00%	2.5%	3.0%	5.0%		
electrical loads due to operations not included															
cleaning							\$90,090		\$3.00	3.00%	2.9%	3.0%	5.0%		
other utilities							\$33,090		\$1.00	1.00%	0.9%	1.0%	2.0%		
indirect costs															
planned maintenance							\$140,490	1.5%	\$4.53	3.00%	2.5%	3.8%	5.0%		
unplanned maintenance							\$190,320	2.0%	\$6.04	4.00%	3.5%	4.2%	5.0%		
security							\$66,000		\$2.00	3.00%	2.9%	3.0%	4.0%		
safety / fire protection							\$48,590		\$1.50	3.00%	2.9%	3.0%	4.0%		
post-operation / DD&D															
demolition							\$2,988,890	30.0%	\$90.60	3.00%	2.5%	3.0%	5.0%		

							9	10	11	12	13	14	15	16	
							2010	2011	2012	2013	2014	2015	2016	2017	
							1,277	1,313	1,350	1,387	1,426	1,466	1,507	1,550	
							Discounted Annual Cost								
							Discount factor	0.05							
							Annual Costs								
							Escalated Annual Cost								
							\$21,557	\$559	\$1,304	\$541	\$532	\$524	\$515	\$501	\$499
							\$21,557	\$590	\$2,185	\$955	\$989	\$1,025	\$1,061	\$1,138	\$1,139
							\$21,557	\$590	\$2,185	\$955	\$989	\$1,025	\$1,061	\$1,138	\$1,139
								\$6,501	\$7,894	\$8,346	\$8,878	\$9,401	\$9,917	\$10,718	\$11,218
Do Nothing (1200 Employee Reduction & 300 To Town Scenario)															

Alternative 9, DO NOTHING (INTEC LCC Analysis Summary Sheet 1)

										17	18	19	20	21	22	23	24	
										2018	2019	2020	2021	2022	2023	2024	2025	
										1,593	1,638	1,683	1,730	1,779	1,829	1,880	1,933	
										Discounted Annual Cost	\$481	\$483	\$756	\$1,910	\$460	\$453	\$445	\$438
										Discount factor	0.4196	0.3947	0.3740	0.3560	0.3394	0.3241	0.3099	0.2965
										Annual Costs	\$1,180	\$1,223	\$2,017	\$5,365	\$1,360	\$1,409	\$1,461	\$1,514
										Estimated Annual Cost	\$1,180	\$1,223	\$2,017	\$5,365	\$1,360	\$1,409	\$1,461	\$1,514
										Cumulative Discounted LCC	\$11,707	\$12,189	\$12,946	\$14,856	\$15,315	\$15,768	\$16,213	\$16,652
Do Nothing (1200 Employee Reduction & 300 To Town Scenario)										cost / sq ft	% of acquisition cost	\$ / square foot	annual increase	Min	Target	Max		
INTEC	AREA Sq. Ft	33,000																
	Capital Requests	\$1,780																
	capital acquisition	\$0.00																
	Title I	\$0.00	0.00%		5.8%	10.0%	14.5%											
	Title II	\$0.00	0.00%		12.0%	14.0%	16.0%											
	Title III	\$0.00																
	capital maintenance																	
	minor remodel every 5 yr.	\$354,750	3.50%	\$16.75	4.0%	2.5%	3.0%	5.0%										
	minor remodel every 10 yr.	\$480,300	3.98%	\$15.10	4.0%	3.0%	5.0%	7.0%										
	major remodel every 20 yr.	\$996,600	10.00%	\$30.20	4.0%	8.0%	10.0%	12.0%										
	direct costs (associated with direct operations)																	
	heating / cooling	\$32,110		\$0.97	3.00%	2.0%	3.0%	4.0%										
	lighting	\$22,110		\$0.67	3.50%	2.5%	3.0%	5.0%										
	electrical loads due to operations not included																	
	cleaning	\$89,800		\$3.00	3.33%	2.0%	3.0%	5.0%										
	other utilities	\$33,800		\$1.00	1.66%	0.50%	1.0%	2.0%										
	indirect costs																	
	planned maintenance	\$140,490	1.5%	\$4.53	3.33%	2.5%	3.8%	5.0%										
	unplanned maintenance	\$199,320	2.0%	\$6.04	4.23%	3.5%	4.2%	5.0%										
	security	\$66,800		\$2.00	3.00%	2.0%	3.0%	4.0%										
	safety / fire protection	\$49,500		\$1.50	3.00%	2.0%	3.0%	4.0%										
	post-operation / DD&D																	
	demolition	\$2,989,800	30.0%	\$90.60	3.50%	2.5%	3.0%	5.0%										

										25	26	27	28	29	30	31	32	33	34		
										2026	2027	2028	2029	2030	2031	2032	2033	2034	2035		
										1,587	2,042	2,100	2,158	2,219	2,281	2,345	2,410	2,478	2,547		
										Discounted Annual Cost	\$691	\$461	\$418	\$411	\$405	\$396	\$392	\$386	\$380	\$374	
										Discount factor	0.90										
										Annual Costs	\$2,514	\$1,746	\$1,685	\$1,746	\$1,819	\$1,945	\$2,016	\$2,090	\$2,167	\$2,247	
										Estimated Annual Cost	\$2,514	\$1,912	\$1,685	\$1,746	\$1,819	\$1,945	\$2,016	\$2,090	\$2,167	\$2,247	
										Cumulative Discounted LCC	\$17,343	\$17,894	\$18,222	\$18,633	\$19,038	\$19,416	\$19,763	\$20,083	\$20,383	\$20,657	
Do Nothing (1200 Employee Reduction & 300 To Town Scenario)										cost / sq ft	% of acquisition cost	\$ / square foot	annual increase	Min	Target	Max					
INTEC	AREA Sq. Ft.	33,000																			
	Capital Requests	\$1,780																			
	capital acquisition	\$0.00																			
	Title I	\$0.00	0.00%		5.8%	10.0%	14.5%														
	Title II	\$0.00	0.00%		12.0%	14.0%	16.0%														
	Title III	\$0.00																			
	capital maintenance																				
	minor remodel every 5 yr.	\$354,750	3.50%	\$10.75	4.0%	2.5%	3.0%	5.0%													
	minor remodel every 10 yr.	\$480,300	3.98%	\$15.10	4.0%	3.0%	5.0%	7.0%													
	major remodel every 20 yr.	\$996,600	10.00%	\$30.20	4.0%	8.0%	10.0%	12.0%													
	direct costs (associated with direct operations)																				
	heating / cooling	\$32,110		\$0.97	3.00%	2.0%	3.0%	4.0%													
	lighting	\$22,110		\$0.67	3.50%	2.5%	3.0%	5.0%													
	electrical loads due to operations not included																				
	cleaning	\$89,800		\$3.00	3.33%	2.0%	3.0%	5.0%													
	other utilities	\$33,800		\$1.00	1.66%	0.50%	1.0%	2.0%													
	indirect costs																				
	planned maintenance	\$140,490	1.5%	\$4.53	3.33%	2.5%	3.8%	5.0%													
	unplanned maintenance	\$199,320	2.0%	\$6.04	4.23%	3.5%	4.2%	5.0%													
	security	\$66,800		\$2.00	3.00%	2.0%	3.0%	4.0%													
	safety / fire protection	\$49,500		\$1.50	3.00%	2.0%	3.0%	4.0%													
	post-operation / DD&D																				
	depreciation	\$2,889,800	30.0%	\$90.60	3.50%	2.5%	3.0%	5.0%													

Alternative 9, DO NOTHING (INTEC LCC Analysis Summary Sheet 2)

Alternative 9, DO NOTHING (TRA LCC Analysis Summary Sheet 1)

Alternative 9, DO NOTHING (TRA LCC Analysis Summary Sheet 2)

										1	2	3	4	5	6	7	8		
										2002	2003	2004	2005	2006	2007	2008	2009		
										1.024	1.023	1.022	1.132	1.144	1.176	1.209	1.242		
										Discounted Annual Cost	\$2,387	\$2,349	\$2,310	\$3,221	\$4,009	\$3,919	\$1,506	\$1,412	
										Discount factor	0.983	0.969	0.955	0.913	0.879	0.866	0.869		
										Annual Costs	\$145,949	\$2,514	\$2,405	\$2,497	\$3,168	\$4,481	\$4,873	\$2,963	\$2,135
										Escalated Annual Cost	\$174,960	\$2,514	\$2,505	\$2,607	\$3,361	\$5,190	\$5,343	\$2,963	\$2,135
										Cumulative Discounted LCC	\$2,387	\$4,737	\$7,047	\$10,268	\$14,277	\$18,196	\$19,703	\$21,115	
LICP OFFICE @ TRA, using existing @ INTEC & CFA (1200 Employee Reduction & 300 to Town Scenario)										cost / sqft	% of acquisition cost	\$ / square foot	annual increase	Min	Target	Max			
AREA Sq. Ft										18,795									
Capital Requests										\$10,992									
capital acquisition										\$4,433,209	\$236.30								
Title I										\$16.00	8.00%			4.0%	8.0%	12.0%	\$0	\$0.0	\$0.0
Title II										\$20.00	10.00%			6.0%	10.0%	14.0%	\$0	\$0.0	\$0.0
Construction										\$200.00							\$0	\$1,878.5	\$1,878.5
capital maintenance																	\$0	\$1,831.0	\$0.0
minor remodel every 5 yr.										\$155,164	3.00%		4.0%	2.5%	3.0%	5.0%	\$0	\$0.0	\$0.0
minor remodel every 10 yr.										\$221,663	5.00%		4.0%	3.0%	5.0%	7.0%	\$0	\$0.0	\$0.0
major remodel every 20 yr.										\$443,326	10.00%		4.0%	8.0%	10.0%	12.0%	\$0	\$0.0	\$0.0
direct costs (associated with direct operations)																	\$0	\$0.0	\$0.0
heating / cooling										\$18,221		\$0.97	3.00%	2.0%	3.0%	4.0%	\$123.1	\$123.1	\$126.9
lighting										\$12,588		\$0.67	3.00%	2.5%	3.0%	5.0%	\$86.4	\$86.4	\$88.5
electrical loads due to operations not included																	\$0.0	\$0.0	\$0.0
cleaning										\$28,178		\$1.50	3.00%	2.0%	3.0%	5.0%	\$181.9	\$181.9	\$186.1
other utilities										\$18,785		\$1.00	3.00%	0.50%	1.0%	2.0%	\$119.6	\$119.6	\$123.4
indirect costs																	\$0	\$0.0	\$0.0
planned maintenance										\$66,409	1.5%	\$3.54	3.00%	2.5%	3.8%	5.0%	\$391.1	\$391.1	\$401.4
unplanned maintenance										\$33,249	0.8%	\$1.77	4.00%	3.5%	4.2%	5.0%	\$196.8	\$196.8	\$201.9
security										\$56,355		\$3.00	3.00%	2.0%	3.9%	4.0%	\$336.4	\$336.4	\$346.6
safety / fire protection										\$38,178		\$1.50	3.00%	2.0%	3.0%	4.0%	\$229.1	\$229.1	\$236.4
post-operation / DD&D																	\$0	\$0.0	\$0.0
demolition										\$354,661	8.0%	\$18.88	3.00%	2.5%	3.0%	5.0%	\$2152.6	\$2152.6	\$2214.4

										9	10	11	12	13	14	15	16		
										2010	2011	2012	2013	2014	2015	2016	2017		
										1.277	1.313	1.350	1.387	1.428	1.466	1.507	1.550		
										Discounted Annual Cost	\$5,719	\$1,545	\$1,365	\$1,532	\$1,349	\$1,451	\$1,377	\$1,343	\$1,759
										Discount factor	0.983	0.969	0.955	0.939	0.919	0.893	0.869	0.847	
										Annual Costs	\$145,949	\$2,210	\$5,038	\$2,617	\$2,546	\$2,595	\$2,687	\$4,241	\$3,616
										Escalated Annual Cost	\$174,960	\$2,460	\$2,288	\$2,703	\$2,556	\$2,840	\$2,837	\$2,913	\$4,020
										Cumulative Discounted LCC	\$22,661	\$24,026	\$25,657	\$26,946	\$28,358	\$29,735	\$31,077	\$32,836	
LICP OFFICE @ TRA, using existing @ INTEC & CFA (1200 Employee Reduction & 300 to Town Scenario)										cost / sqft	% of acquisition cost	\$ / square foot	annual increase	Min	Target	Max			
AREA Sq. Ft										18,785									
Capital Requests										\$10,992									
capital acquisition										\$4,433,209	\$206.00								
Title I										\$16.00	8.00%		4.0%	8.0%	12.0%				
Title II										\$20.00	10.00%		6.0%	10.0%	14.0%				
Construction										\$200.00									
capital maintenance																			
minor remodel every 5 yr.										\$155,164	3.00%	4.0%	2.5%	3.0%	5.0%				
minor remodel every 10 yr.										\$221,663	5.00%	4.0%	3.0%	5.0%	7.0%				
major remodel every 20 yr.										\$443,326	10.00%	4.0%	8.0%	10.0%	12.0%				
direct costs (associated with direct operations)																			
heating / cooling										\$18,221		\$0.97	3.00%	2.0%	3.0%	4.0%			
lighting										\$12,588		\$0.67	3.00%	2.5%	3.0%	5.0%			
electrical loads due to operations not included																			
cleaning										\$28,178		\$1.50	3.00%	2.0%	3.0%	5.0%			
other utilities										\$18,785		\$1.00	3.00%	0.50%	1.0%	2.0%			
indirect costs																			
planned maintenance										\$66,409	1.5%	\$3.54	3.00%	2.5%	3.8%	5.0%			
unplanned maintenance										\$33,249	0.8%	\$1.77	4.00%	3.5%	4.2%	5.0%			
security										\$56,355		\$3.00	3.00%	2.0%	3.0%	4.0%			
safety / fire protection										\$38,178		\$1.50	3.00%	2.0%	3.0%	4.0%			
post-operation / DD&D																			
demolition										\$354,661	8.0%	\$18.86	3.00%	2.5%	3.0%	5.0%			

Alternative 10, TRA OFFICE (LCC Analysis Summary Sheet 1)

										17	18	19	20	21	22	23	24		
										2018	2019	2020	2021	2022	2023	2024	2025		
										1.593	1.638	1.683	1.730	1.779	1.829	1.880	1.933		
										Discounted Annual Cost	\$34,719	\$1,241	\$1,327	\$1,538	\$1,181	\$1,382	\$1,239	\$1,147	\$1,106
										factor	0.953	0.9126	0.8941	0.8749	0.8558	0.8371	0.8189	0.8009	0.7831
										Annual Costs	\$150,492	\$2,985	\$3,091	\$3,202	\$2,137	\$3,863	\$3,558	\$3,685	\$3,819
										Escalated Annual Cost	\$157,546	\$2,985	\$3,361	\$4,102	\$3,316	\$4,040	\$3,858	\$3,761	\$3,810
										Cumulative Discounted LCC	\$157,546	\$34,077	\$35,404	\$36,941	\$38,122	\$39,564	\$40,743	\$41,890	\$42,996
LCCP OFFICE @ TRA, using existing @ INTEC & CFA (1200 Employee Reduction & 300 to Town Scenario)										cost / sqft	% of acquisition cost	\$ / square foot	annual increase	Min	Target	Max			
AREA Sq. Ft										18,785									
Capital Requests										\$10,992									
capital acquisition										\$4,433,289	\$236.00								
Title I										\$16.00	0.000%			4.0%	8.0%	12.0%			
Title II										\$26.00	0.000%			6.0%	10.0%	14.0%			
Construction										\$206.00									
capital maintenance																			
minor remodel every 5 yr.										\$155,164	0.000%		4.0%	2.5%	3.0%	5.0%			
minor remodel every 10 yr.										\$221,663	0.000%		4.0%	3.0%	5.0%	7.0%			
major remodel every 20 yr.										\$443,326	0.000%		4.0%	8.0%	10.0%	12.0%			
direct costs (associated with direct operations)																			
heating / cooling										\$18,221		\$0.97	0.000%	2.0%	3.0%	4.0%			
lighting										\$12,586		\$0.67	0.000%	2.5%	3.0%	5.0%			
electrical loads (see to operations not included)																			
cleaning										\$28,178		\$1.50	0.000%	2.0%	3.0%	5.0%			
other utilities										\$18,785		\$1.00	0.000%	0.50%	1.0%	2.0%			
indirect costs																			
planned maintenance										\$66,499	1.5%	\$3.54	0.000%	2.5%	3.8%	5.0%			
unplanned maintenance										\$33,249	0.8%	\$1.77	0.000%	3.5%	4.2%	5.0%			
security										\$56,355		\$3.00	0.000%	2.0%	3.0%	4.0%			
safety / fire protection										\$28,178		\$1.50	0.000%	2.0%	3.0%	4.0%			
post-operation / DODD																			
demolition										\$264,661	8.0%	\$18.88	0.000%	2.5%	3.0%	5.0%			

										25	26	27	28	29	30	31	32	33	34	35		
										2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036		
										1.987	2.042	2.100	2.159	2.219	2.281	2.345	2.410	2.476	2.542	2.619		
										Discounted Annual Cost	\$1,098	\$2,342	\$1,652	\$1,636	\$1,675	\$1,663	\$1,245	\$972	\$865	\$941	\$0	
										Discount factor	0.953	0.9290	0.9041	0.8798	0.8561	0.8329	0.8102	0.7880	0.7663	0.7451	0.7243	
										Annual Costs	\$150,492	\$6,162	\$6,414	\$4,246	\$4,400	\$4,559	\$16,643	\$5,439	\$5,072	\$5,256	\$5,447	\$0
										Escalated Annual Cost	\$157,546	\$3,095	\$3,595	\$4,290	\$4,400	\$4,609	\$4,723	\$6,171	\$5,072	\$5,395	\$5,697	\$0
										Cumulative Discounted LCC	\$157,546	\$44,083	\$46,425	\$47,478	\$48,514	\$49,580	\$50,593	\$51,538	\$52,589	\$53,775	\$54,716	\$54,716
LCCP OFFICE @ TRA, using existing @ INTEC & CFA (1200 Employee Reduction & 300 to Town Scenario)										cost / sqft	% of acquisition cost	\$ / square foot	annual increase	Min	Target	Max						
AREA Sq. Ft										18,785												
Capital Requests										\$10,992												
capital acquisition										\$4,433,289	0.000%											
Title I										\$16.00	0.000%			4.0%	8.0%	12.0%						
Title II										\$26.00	0.000%			6.0%	10.0%	14.0%						
Construction										\$206.00												
capital maintenance																						
minor remodel every 5 yr.										\$155,164	0.000%		4.0%	2.5%	3.0%	5.0%						
minor remodel every 10 yr.										\$221,663	0.000%		4.0%	3.0%	5.0%	7.0%						
major remodel every 20 yr.										\$443,326	0.000%		4.0%	8.0%	10.0%	12.0%						
direct costs (associated with direct operations)																						
heating / cooling										\$18,221		\$0.97	0.000%	2.0%	3.0%	4.0%						
lighting										\$12,586		\$0.67	0.000%	2.5%	3.0%	5.0%						
electrical loads (see to operations not included)																						
cleaning										\$28,178		\$1.50	0.000%	2.0%	3.0%	5.0%						
other utilities										\$18,785		\$1.00	0.000%	0.50%	1.0%	2.0%						
indirect costs																						
planned maintenance										\$66,499	1.5%	\$3.54	0.000%	2.5%	3.8%	5.0%						
unplanned maintenance										\$33,249	0.8%	\$1.77	0.000%	3.5%	4.2%	5.0%						
security										\$56,355		\$3.00	0.000%	2.0%	3.0%	4.0%						
safety / fire protection										\$28,178		\$1.50	0.000%	2.0%	3.0%	4.0%						
post-operation / DODD																						
demolition										\$264,661	8.0%	\$18.88	0.000%	2.5%	3.0%	5.0%						

Alternative 10, TRA OFFICE (LCC Analysis Summary Sheet 2)